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ABSTRACT

This volume is the first in a series (developed in response to a needs assessment survey of special educators in Alberta, Canada) providing practical suggestions about instructional strategies, classroom management, preparing individual program plans, and understanding special needs. Book 1 highlights strategies for differentiating instruction within the regular classroom for students experiencing learning or behavioral difficulties or who are gifted and talented. It includes ideas for varying instructional time, the learning environment, resources, materials, presentation, assignments, and assessments to accommodate students with diverse needs. It contains instructional strategies for core subjects (language arts and mathematics) as well as for specific categories of differences. Many forms to assist teacher planning are provided in the extensive appendices, as are instructional guides, inventories, and examples of modifications. (Contains 82 references.) (DB)

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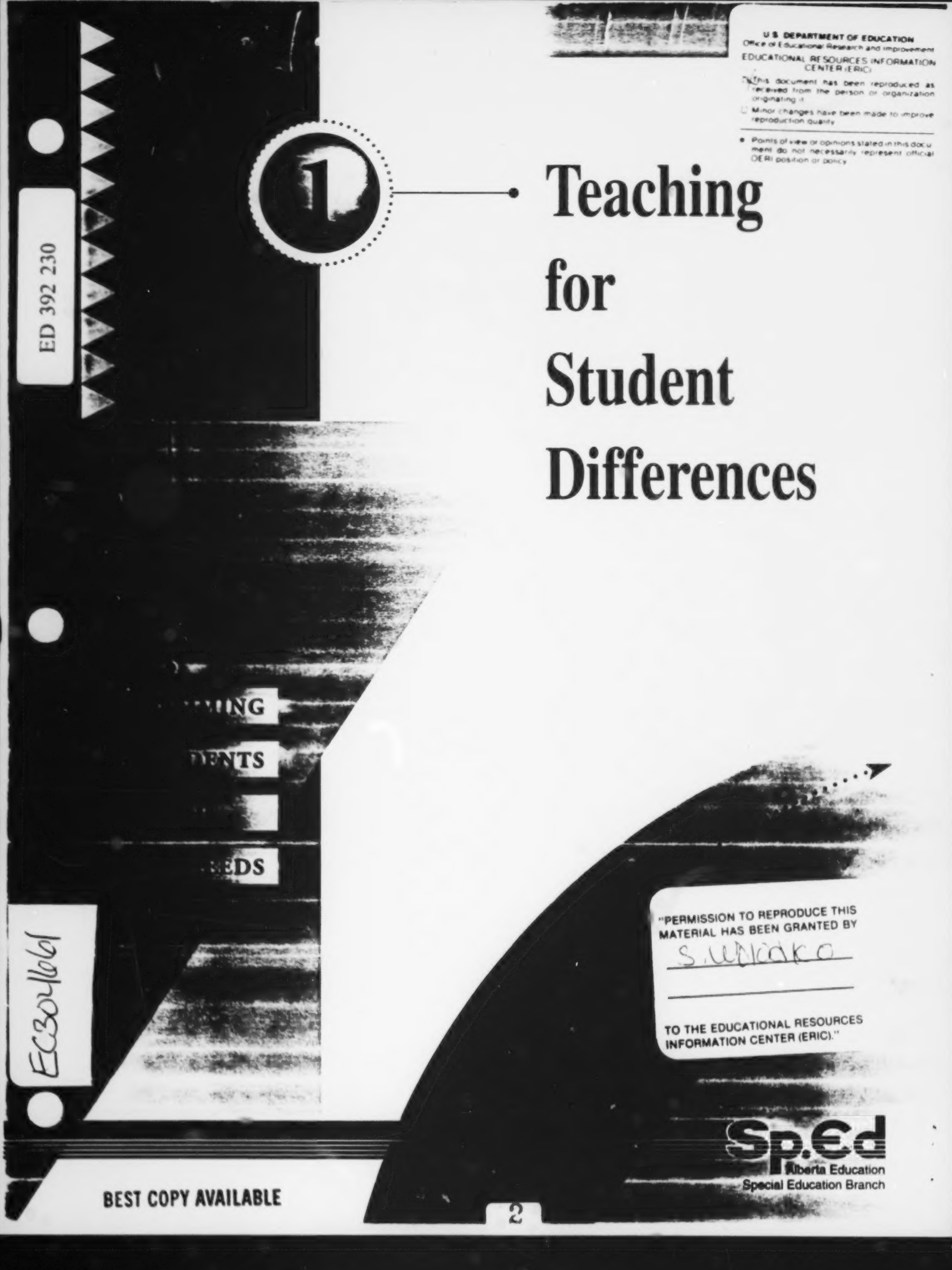

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Teaching for Student Differences

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This document is intended for:

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Administrators	✓
Counsellors	✓
Parents	
General Public	

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Teaching for Student Differences

Introduction to the Series

Programming for Students with Special Needs is a series developed in response to a needs assessment survey conducted by the Special Education Branch of Alberta Education in the Spring of 1992.

The information provided by survey respondents has been used to guide the nature and content of the series. The respondents indicated the need for practical suggestions about instructional strategies, classroom management, preparing individual program plans and understanding the nature of special needs. They also wanted information about the availability of special education resources.

The following books are included in the series. The information in each book is interrelated and can be used to provide instruction to all students.

Book 1: ***Teaching for Student Differences***
Highlights strategies for differentiating instruction within the regular classroom for students who may be experiencing learning or behavioural difficulties, or who may be gifted and talented. It includes ideas for varying instructional time, the learning environment, resources, materials, presentation, assignments and assessments to accommodate students with diverse needs. This book contains instructional strategies for core subjects as well as by categories of differences; i.e., learning disabilities, behaviour disorders and gifted and talented. A variety of useful forms to assist teacher planning is found in the appendices.

Book 2: ***Essential and Supportive Skills for Students with Developmental Disabilities***
Includes:

- developmental checklists for communication skills; i.e., receptive, expressive, social, articulation and vocabulary
- checklists for gross and fine motor development, including colouring, graphics, manuscript printing and cutting
- charts and checklists which provide a continuum of life skills by domain (domestic and family life, personal and social development, leisure/recreation/arts, citizenship and community involvement, career development)
- checklists for mathematics, reading and writing to Grade 6
- an annotated list of other teaching resources.

Book 3: ***Individualized Program Plans***
Contains a process for IPP development and strategies for involving parents. This book provides information on writing long-term goals and short-term objectives along with case studies and samples of completed IPPs. It addresses transition planning and features forms and checklists to assist in planning.

Book 4: ***Teaching Students Who are Deaf or Hard of Hearing***
Includes information on the nature of hearing loss and the various communication systems which may be used. The book contains information on amplification, educational technologies, program planning and teaching strategies.

Book 5: ***Teaching Students with Visual Impairments***
Is under development in collaboration with the British Columbia Ministry of Education. The expected release date is Spring 1996.

Book 6: ***Teaching Students with Learning Disabilities: Classroom Strategies***
Is under development in collaboration with the Elk Island Public Schools Regional District. The expected release date is Spring 1996.

Programming for Students with Special Needs is not intended to be a complete authority on the many disciplines associated with the education of students with special needs. In providing instruction to students with special needs, staff should utilize the support services available in their jurisdiction.

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Introduction

Students differ in the way they learn, in the rate at which they learn, in their confidence as learners, in their ability to get along with others and in the way they behave. Effective teaching requires consideration of student differences. The challenge for teachers is to provide each student with programming that:

- provides challenge and success
- promotes growth
- involves him or her as an active learner
- provides age and developmentally appropriate learning experiences
- enhances continuity of learning
- increases self-esteem through the demonstration of learning.

There is a relationship among all components of programming for student learning: the nature of the student, curriculum expectations, evaluation, assessment, communication and organizational and instructional strategies. This book focuses on organizational and instructional strategies, one of the components of programming for student learning.

Instructional Strategies

Effective teachers select strategies based on their judgements about the nature of the student, what the student can do and what knowledge, skills and attitudes the student should learn next.

Strategies are not generally tied to specific student differences. A strategy that works well with a gifted and talented student may also be effective with a student who has a learning disability or a behaviour disorder. Strategies for improving social skills or self-concept can be integrated in the teaching of language arts, mathematics or any other subject or skill within any domain. Strategies are often applicable for students at all grade levels including junior and senior high school.

To provide teachers with a starting point, the strategies are sorted as follows:

- generic strategies: learning styles, prosocial skills and cooperative learning (Section I, page TSD.3)
- organizational and instructional strategies related to varying time, environment, resources, materials and presentation (Section II, page TSD.12)
- general adaptations and adaptive techniques in language arts and mathematics (Section III, page TSD.18)
- categories of differences: learning disabilities, managing behaviours in the classroom and gifted and talented (Section IV, page TSD.31)

- strategies placed in context, for instance, within a particular individual program plan, used in response to particular learner characteristics or in an effort to meet certain goals (Section V, page TSD.55).

Although this book includes a broad range of strategies, teachers will have many others to incorporate into their teaching. Additional information and strategies are provided in the following documents which are available from the Learning Resources Distributing Centre:

- *Behavior Disorders in Schools: a Practical Guide to Identification, Assessment and Correction* (1986). Alberta Education.

- *Teaching Students with Learning Disabilities: Classroom Strategies* (to be released Spring 1996) — Book 6 in the *Programming for Students with Special Needs* series. Alberta Education.

- *Teaching Students Who are Gifted and Talented* (to be released by Fall 1997) — Book 7 in the *Programming for Students with Special Needs* series. Alberta Education.

For additional resources, consult Alberta Education's *Resources for Special Education & Guidance and Counselling: an Annotated List*, available from the Special Education Branch.

Selection and implementation of instructional strategies are ongoing processes. Because different strategies are designed to achieve different goals and to respond to different student needs, periodically reviewing strategies helps ensure a range of strategies is used. Most teachers use a broad range: directive strategies such as one-to-one and direct instruction; mediative strategies such as open-ended discussion and concept formation; collaborative strategies such as peer tutoring and cooperative learning; generative strategies such as brainstorming and forecasting and independent strategies such as learning centres and science fairs.

Ultimately the effectiveness of a strategy is measured by whether or not the student can demonstrate the knowledge, skills or attitudes expected. Some tips:
- give a particular strategy time to work
- track strategies used with a particular student
- do not discount a strategy simply because it did not work in the past; the timing or the setting may not have been correct
- be prepared, however, to modify or change a strategy if student feedback suggests it is not working.

In practice, ascertaining the effect of a particular strategy requires ongoing monitoring. A sample form to help teachers track strategies is provided in Appendices 1 and 2, pages TSD.60–61.

Section I
Generic Strategies

This section provides information about learning styles, prosocial skills instruction and cooperative learning strategies. These strategies are not specific to a discipline or category of difference.

Learning Styles

Students often have a preferred mode of learning. Some students learn best by seeing (visual), others by hearing (auditory) and yet others by touching and moving (kinesthetic). Some students do not have a strong preference. For others, their preference may vary depending on the situation and type of information. Learning and skill development are enhanced if teachers recognize differences and vary instruction. Acknowledging, understanding and accepting the concept of learning styles can lead to responsive instruction where teachers provide a wide variety of lessons, use a broad range of strategies, activities and types of assessment materials and methods.

Teaching to all modalities benefits students because it ensures that each student's learning style preference is addressed, thereby enhancing opportunities for the student to learn material and develop skills.

The implications of learning style research for teachers and students are that:

- students should try to understand how they learn best

- students should learn compensatory strategies; for example, those who have difficulty attending when the teacher is instructing can learn to put themselves on the alert and concentrate on mind mapping or note-taking

- lessons should be planned to accommodate the different ways students learn.

There are many perceptual preference inventories. Samples are provided in Appendices 3 to 7, pages TSD.62–66. Because students learn in different ways and their preferred way may even be situationally dependent, the key for teachers is to acknowledge differences and provide varied instruction and assessment.

The following strategies accommodate specified modalities and can be used in various combinations in any particular lesson to suit the different ways in which students learn.

Kinesthetic Style

Strategies which accommodate kinesthetic learners include:

- using classroom demonstrations
- using experiential learning, simulation activities, field trips
- painting, drawing, creating models, slides, videotapes, puppets, dioramas
- clapping or tapping out numbers, syllables, etc.
- lab work
- teaching students to take notes
- show and tell
- acting, mime, charades, dancing, rhythmic movement
- using games, puzzles, manipulatives
- using sandpaper or felt letters, writing in sand or clay, using three-dimensional letters and numbers.

Visual Style

Strategies which accommodate visual learners include using:

- artifacts, objects, models
- slides, transparencies, illustrations, graphics, demonstrations
- abacus, colour-coding systems, rulers and number lines, visual symbols for sound
- maps, charts, graphs, pictures, diagrams
- microscopes
- dictionaries
- matching games, configuration clues
- visual clues on the chalkboard for all verbal directions
- visualization techniques (visualize spelling words)
- coloured markers, pens or chalk on the overhead or blackboard.

Auditory Style

Strategies which accommodate auditory learners include:

- direct instruction, lecturing
- having learners verbalize tasks
- using tape recorders; for example, having students listen to a tape while they read
- reading to students, paraphrasing
- providing listening centres
- allowing learners to think out loud and spell audibly
- using records, tapes and films
- employing music, rhythm, melody
- saying syllables orally, integrating music, using choral speech, rhyming games, debating, radio plays and discussions
- giving verbal as well as written directions.

To help plan lessons which incorporate the three learning modalities, a lesson planning form is provided in Appendix 8, page TSD.67.

Prosocial Skills

Social skills, such as listening to the teacher or reaching a compromise, enable students to function well in school and to get along with others.

Although many social skills are acquired through experience, the non-systematic nature of experience may result in some students lacking certain skills or learning inappropriate behaviours. Instruction in prosocial skills provides opportunities for all students to acquire or practise skills which facilitate learning and social interactions. Social skills instruction can be incorporated in core or complementary course lessons or offered in separate lessons.

A review of prosocial skills programs and resources indicates a fair degree of consistency in the way in which skills are grouped. The following groupings reflect a synthesis:

- **classroom survival skills** include skills such as listening to the teacher, following instructions and classroom rules
- **interpersonal skills** include skills such as complimenting others, beginning a conversation, making eye contact, listening and joining in a discussion
- **emotional management skills** include skills such as recognizing another's feelings and recognizing one's own feelings
- **coping or anger management skills** include skills such as self-control and responding appropriately to teasing or insults
- **stress management skills** include skills such as responding to failure and dealing with embarrassment.

Process for Social Skills Training

Research indicates consensus on the process for social skills training. The process includes:

- communicating the reason for developing the skill (sharing the objective and purpose)
- indicating a non-example and continuing with good examples
- defining the skill or considering what steps are involved in the skill
- modelling the skill
- students creating role-play situations
- providing feedback to ensure processing of the skill
- providing opportunities for transferring the skill to other situations

The ultimate goal of prosocial skills training is to have the learned skills used in real-life situations. Suggestions to guide planning of social skills lessons follow:

- focus on a limited number of skills a year and build on these
- start with a simple skill such as following directions, listening, responding to signals, asking for help, or ignoring; not with a more complex skill such as response to aggression
- teacher models a non-example; asks students what the teacher did and pulls skill steps from the students' responses; students identify, in their own language, what was wrong and what should be done
- teacher models several positive examples; always provide more positive examples and never include students in non-examples
- have students role play situations
- to reduce anxiety, begin by having teacher and students role play together, move to guided role play (the teacher structures the situation) and finally, to independent role play (students generate the ideas and come back to the group and debrief)
- use a specific process to provide feedback
  - provide feedback to the main actor (did he or she stay in role, make it seem real, use all the steps and use appropriate body language?)
  - provide feedback to co-actors (did they provide realistic details?)
  - provide feedback to the audience (how well did they watch, how well did they pick up non-verbal cues?)
- provide opportunities throughout the day for feedback and practising the skill.

The chart on the following page provides ideas for creating role-play situations to teach the interpersonal skill of compromising.

See Appendix 9, page TSD.68, for sample elementary and junior high school social skills lesson plans, Appendix 10, page TSD.72 for simplification of skill steps for young students and Appendix 11, page TSD.73, for an annotated bibliography of social skills training resources.

Role-play Situations[1]

Situations Target Behaviours	School Problems (Teacher/Peers)	Neighbourhood Problems	Sibling Problems	Parent Problems
Listen Carefully	Your teacher is assigning special jobs. By mistake she assigns two of you the same job.	You and a friend can get one pizza. Your friend likes pepperoni but you want ham.	Your mom asks what you and your sister want for dessert. You want ice cream; your sister wants cake. Mom will only serve one thing.	Mom gives you many jobs to do as she gets ready to leave. You're afraid you can't finish them all by the time she returns.
Treat Others Nicely	The winner of the spelling bee gets to choose the P.E. activity. When time is up, two of you are tied for first place.	A bunch of kids in your neighbourhood get together for a basketball game, but there is one extra person.	You and your sister go in the family room to watch T.V. Your sister wants to sit in the comfortable chair and so do you.	You ask your mom if she will take you swimming. She says she will, but she's doing the dishes right now.
Join in with Others	You are the team captain today. Two people on your team want to be the pitcher. You need to help settle the matter.	Your friend comes over to play. Your friend wants to ride bikes, but you want to play catch.	You and your brother are doing the yard. The jobs are weeding the garden and mowing the lawn. You both want to mow.	Your family plans to camp with friends who live far away. Dad doesn't want to drive that far; you know of a good place halfway.
Keep a Good Attitude	You have some free time during class to play a game. Your friend wants to play "Battleship" but you want to play checkers.	You go to your friend's house to go swimming. When you get there, your friend has decided to watch T.V. instead.	You and your brother both want to sit in the front seat of the car on the way to the store. Only one of you can fit.	One of your favourite T.V. shows is just starting but your parents come in and want to watch the news.
Take Responsibility for Self	You are on the playground with your friend. Your friend wants to play dodgeball but you want to play four-square.	You're babysitting. The two children start arguing about what game to play. You need to help settle the matter.	If you and your sister finish vacuuming and washing the windows, you can go out for ice cream. You both want to vacuum.	You go shopping with your mom. You like an outfit that costs $30. Mom has $20 for you to spend. You have $20 saved up.
Stay Calm and Relaxed	For a class project you are baking cookies. You and a classmate want to use the cutter at the same time.	You're staying at your friend's house. You want to go out and play. Your friend has to fold laundry.	You go and turn on the T.V. You want to watch one show, but your brother wants to watch another.	Your parents say you spend too much in sports; you have to learn an instrument. Mom prefers the harp.
Solve Problems	Your teacher has told you and a classmate that you can each take out a ball today. You discover that one of the balls is flat.	You and a friend go to the movies. When you both get there, you want to see one movie, but your friend wants to see a different one.	You and your brother have just finished building a model plane. You both want to put it in your own room.	Your mom is making chocolate chip cookies. She likes to put walnuts in them, but you don't like walnuts.

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[1] From *Room 14: a social language program* (p. 99), by C. Wilson, 1993, East Moline, IL: Linguisystems. Adapted and reprinted with permission.

Cooperative Learning Strategies

Cooperative learning is an instructional strategy which involves students working cooperatively in small heterogeneous groups to accomplish common learning goals to maximize learning for all. Success results from the positive interdependence and mutual support developed among group members over time. Constructive peer relationships are a motivating factor for both cognitive and social development.

The ability to build and maintain positive relationships is important for all students. When students leave school, successful participation in the community and in the workplace is dependent upon not only knowledge and information-handling skills, but also upon skills of communication, critical thinking and problem solving, as well as the ability to plan and make decisions with others.

Research[2] suggests that cooperative learning contributes to:

- higher self-esteem
- higher achievement
- increased retention of information
- greater social support
- more on-task behaviour
- greater collaborative skills
- greater intrinsic motivation
- increased ability to see other points of view
- better attitudes toward school
- better attitudes toward teachers
- greater use of high-level reasoning
- more positive psychological adjustment.

In the Learning Together Model developed by Johnson and Johnson,[3] five basic elements are identified.

1. **Positive Interdependence**
   Positive interdependence is the perception that group members are connected and need each other in order to be successful in accomplishing a common goal. It may be enhanced through joint rewards (received by all when all teammates are successful), shared resources, assigned complementary and task-related roles and the establishment of a common identity. All group members must succeed for the group to succeed.

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[2] From *Circles of learning: cooperation in the classroom* (pp. 16–18), by D. W. Johnson, R. T. Johnson, et al., 1992, Alexandria, VA: Association for Supervision and Development. Adapted and reprinted with permission.

[3] From Johnson and Johnson (pp. 2, 8, 10, 14–22, 29). Adapted and reprinted with permission.

2. **Individual Accountability**
   This is the degree of responsibility each student feels toward mastering the learning and toward supporting all members of the group in their learning. The success of the group should be dependent upon the individual efforts of all group members. Each one becomes stronger individually. To maximize success for all, expectations and the method by which understanding is to be demonstrated should be established at the beginning of the lesson.

3. **Social Skills**
   In order for students to collaborate effectively, appropriate communication, leadership, decision making and conflict-management skills must be taught. Students must perceive the need for the skill, understand its specific attributes and have opportunities to practise the skill. By practising and receiving feedback, students continue using particular skills.

4. **Face-to-face Interaction**
   Students benefit from participating in carefully structured cooperative learning groups. Group members should be in close proximity to encourage dialogue so they can continually progress by helping, sharing and encouraging efforts to learn. Higher-level thinking tasks enhance the quantity and quality of the verbal exchange, as well as the intensity of the interaction. Positive interdependence, social skills and individual accountability enhance the nature of the face-to-face interaction.

5. **Group Processing**
   Students should be given opportunities for individual and group reflection about their learning. They need to assess their achievement of the academic task and their collaborative efforts. This process enables students to expand their effective use of skills and to identify ways in which to improve. Discussion and devices such as questionnaires, learning logs or checklists can be used. Processing enhances working relationships and reinforces the value placed on collaborative skills. This reflection is critical to the success of cooperative learning.

A typical cooperative learning procedure is provided on the following page. Two sample lesson planning guides, a social skills checklist and three samples of team or group evaluation forms are provided in Appendices 12–18, pages TSD.78–85.

Cooperative Learning Procedure

Element	Procedure	Notes
Positive interdependence	1. Students move to assigned (home) groups. Each group member receives a different portion of the information.	Students could decide on a group name prior to beginning task. (Positive interdependence identity)
Individual accountability	2. Students individually read their information, identifying main ideas.	
	3. Students move to form new groups of three with others having the same information (expert groups).	
Face-to-face interaction Social skills	4. In the new group, students discuss the information, clarifying the main ideas and determining a method of sharing information with home group members. Students use active listening skills.	Teacher monitors groups/individuals to assess students' understanding of academic and social skills; e.g., checklist, observation, anecdotal notes
Face-to-face interaction Social skills Positive interdependence • resource • goal • environment Individual accountability	5. Students return to home group and take turns sharing their information. As they share, group members demonstrate active listening skills and record key ideas on individual retrieval sheets, coming to agreement on information to be recorded and . ensuring all group members understand the information.	Round Robin structure; e.g., a. Team goal: master material presented b. Outside force: time limitation imposed c. Criteria for success; e.g., gather minimum of three articles on topic d. Group rewarded for meeting criteria
Individual accountability Positive interdependence	6. One sheet per group is randomly selected by the teacher to be collected for assessment.	All group members sign the sheet indicating they agree with and can explain the answers.
Group processing	7. As a group, students reflect on their success at meeting the academic and social goals; e.g., checklist, rating scale, short answers, etc.	One reflection sheet per group provides an opportunity for students to reach a consensus, set goals for future lessons, etc. Teacher provides specific verbal feedback as well.

In order for cooperative learning to be successful, it is vital to establish and maintain a climate of trust and respect within the class. Ongoing team-building activities foster acceptance, appreciation, support and commitment among students by providing them with opportunities to communicate freely with one another about topics of personal importance (interests, experiences, talents, concerns, aspirations). Students, networking in the context of a large supportive group, can have a positive impact on academic achievement.

Within cooperative learning, the role of the teacher becomes that of facilitator. Academic and social objectives must be identified. Decisions must be made regarding appropriate grouping of students, room arrangements and materials. Before students begin the task, they must clearly understand how positive interdependence and individual accountability will be established and the goals and criteria for success. Monitoring students as they work together enables the teacher to intervene when necessary and to gather data on student behaviour and understanding in order to provide feedback after the lesson. Evaluation of the product and process of group work includes providing opportunities for students and teachers to reflect on the learning.

Typical Cooperative Learning Procedure

Academic and social goals should be established prior to the lesson. Students should be familiar in advance with the attributes of the specific social skill; e.g., active listening and the procedures for cooperative structures; e.g., Jigsaw, Round Robin. The teacher should inform students in advance of the criteria for success, of the procedure for selection of the final product and of the expectations of the group process.

Possible Follow-up Activities

- Debrief and check for understanding using Spencer Kagan's "Numbered Heads Together" structure. Briefly, this involves the following steps:
  - students number off (each student in the group has a different number)
  - teacher asks a question and gives a time limit
  - heads together (students put heads together and make sure everyone knows the answer)
  - teacher calls a number (random selection of number; students with that number raise their hands to be called upon).

  For more information, consult Spencer Kagan's *Cooperative Learning* (1992).

- Use Bloom's Taxonomy (thinking skill levels: knowledge, comprehension, application, analysis, synthesis, evaluation) to design follow-up question sheets to be answered by groups. Use one sheet per group; rotate roles of writer, reader and encourager. All students contribute ideas. One student could be randomly selected to report.

- Have students develop group presentations to share information with the class.

- Use individual quizzes or assignments for assessment/evaluation.

Section II
Organizational and Instructional Strategies

This section provides information about varying time, environment, resources, materials, presentation, assignments and assessment in order to accommodate students with diverse needs. Flexibility is the key to providing instruction which maximizes opportunities for all students to learn.

Varying Instructional Time

Using time flexibly means using time to respond to student needs, to opportunities in the community and to events happening in the world, province, city or town. It means using an interdisciplinary emphasis and timetabling around major school events to enable greater student and staff involvement.

Some specific suggestions are:

- allow some students to work at an assignment for only a short period of time and then move on to another
- allow other students to stick with an assignment until they feel satisfied; some students find it difficult to understand the continuity and do better with larger blocks of time
- allow some students more time to complete written assignments
- provide some students with specific schedules and forewarn them of tests and changes to routine; some students require structure
- alternate quiet and active times.

Varying Learning Environment

Recent studies have examined the effects of light and noise levels on the ability to concentrate. Varying the learning environment means being aware of such effects and being sensitive to the more specialized requirements of students with special needs. This doesn't preclude teachers from establishing a daily routine in the classroom.

Some specific suggestions are:

- permit a student to work in a quiet, uncrowded corner of the room or even in the hall outside the room but do not isolate a student against his or her will
- make use of headphones to quieten outbursts or reduce noise level
- make use of carrels or screens, change lighting; for example, provide a light on a student's desk
- provide an appropriate desk; for example, a wheelchair-accessible desk, lap-top desk, a desk with a side extension, flip-up top desk, or make use of a table instead of a desk

- provide accessories; for example, attach a pencil to the desk, attach a pencil to the student with an extension key ring, use bookends or a bookhold to keep books on the desk, have a list on the desk of items to complete, have a written or pictorial timetable on the desk or in a book, colour code class duo-tangs

- vary the place in which learning can occur; for instance, a laboratory or an outdoor setting rather than a classroom may be more conducive to the acquisition of some concepts

- colour code binders to assist secondary students who need to move from room to room.

Varying Resources, Materials, Presentation, Assignments and Assessment

Research supports the importance of varying teaching tools to respond to student needs. Such practice supports the belief that teachers teach students rather than a course. The charts on the following pages provides some specific suggestions, including suggestions for using computers and CD-ROMs.

Varying Resources, Materials, Presentation, Assignments and Assessment

Resources & Materials	Presentation	Assignments & Assessment
• Use parallel resources at different reading levels. • Use print and non-print materials, such as films, video and audiotapes and dramatic presentations. • Use teacher-and-student-made resources. • Use community resources, such as the local newspaper or radio station, local historian. • Use alternate modes of student materials, such as dictating to a scribe, tape recording, drawing pictures, enlarged or reduced materials, computers, calculators, manipulatives, overlays for textbook pages. • Use adapted devices, such as chalk holders, adapted scissors, built-up pencils, highlighters, erasable pens, corner pouches, alphabet or number line affixed to desk, date and number stamps, spell checker. • Use line indicators, sections on paper, graph paper or raised line paper. • Make window cards so that only one word or line is exposed at a time or allow students to use a small flashlight to follow a line from left to right. • Provide more white space for answers, highlight or colour code directions and key words, put less information on a page. • Adapt textbooks by colour coding, for example, use green for vocabulary, pink for definitions of terms, yellow for facts, names, dates and topic sentences containing a good summary of the information.	• Make use of peer assistants, volunteers or two or more teachers teaching cooperatively (a form to coordinate teaching activities of two or more is provided in Appendix 19, page TSD.86). • Minimize copying activities by providing information or activity on worksheets or handouts. • Provide material in manageable chunks; consider fewer mathematics problems on a page, short tasks, a few questions at a time, specific questions to guide reading; for example, advanced organizers. • Use hand signals or sign language. • Repeat instructions and provide in various formats such as oral, written or taped. • Have students repeat the instructions. • Stand close to the student. • Make use of diagrams, illustrations and multi-media computer systems to illustrate concepts. • Highlight key points in text books. • Use pictures and concrete materials. • Make use of overhead projectors, flipcharts, different coloured chalk and pens, cue cards. • Use students in presentation. • Make use of webs and outline charts (see Appendix 20, page TSD 87).	• Provide assignment options; options for making a report might include radio broadcasts, character letter exchange, letters to authors, different endings to stories, critiques, displays or models, crossword puzzles, filmstrips, dramatic presentations, visual timelines, puppet shows. • Allow students additional time to complete written assignments. • Allow students to take oral exams instead of written ones. • Allow students to answer fewer questions. • Allow use of a scribe.

Varying Resources, Materials, Presentation, Assignments and Assessment (cont'd)

Resources & Materials	Presentation	Assignments & Assessment
• Use computer tools such as word processors, databases, spreadsheets, graphics. • Use new book formats such as CD-ROM storybooks in which the size of text and pace of presentation can be controlled by the student. • Use CD-ROM encyclopedias which make it easy to locate information without applying skills related to alphabetical order. • Provide opportunities for students to use electronic mail to write to other students around the world. • Participate in on-line projects such as the National Geographic Kids' Network.	• Use computer simulations to demonstrate concepts and processes. • Use multimedia computer systems to illustrate and animate concepts. • Display text on a large computer monitor. Highlight words, phrases, sentences and paragraphs using the mouse. • Use computer tutorials and computer-assisted instruction to provide individual practice for students. • Use the Internet to contact a guest expert.	• Allow groups of students to collaborate to create a video to demonstrate their learning. • Allow students to use computer presentation tools to create multimedia products to demonstrate their learning. • Allow students to complete assignments and exams using computers.

A caution: Although flexibility is required to meet a wide range of student needs, research and practice indicate that effective teaching also requires some managerial consistency.

For instance,

- make consistent use of known cues such as flicking the lights or raising an arm to indicate "I'm ready to teach"
- gain control before starting a lesson
- provide only one or two directions at a time.

To assist in the selection, evaluation and tracking of variations or modifications, the following sample worksheets are provided in the appendices:

- Curriculum Modification and Student Supports: a process to guide selection (Appendix 21, page TSD.88)
- Curriculum Modification Workplan: a worksheet to assist in the selection and evaluation of modifications (Appendix 22, page TSD.89)
- Modification Planning Form: a worksheet to assist in the selection of modifications (Appendix 23, page TSD.90)
- Two Modification Process Examples: worksheets to assist in keeping track of modifications (Appendices 24 and 25, pages TSD.91–93)
- Program Analysis Worksheet (PAW): a worksheet to assist in the selection and tracking of modifications (Appendix 26, page TSD.94).

To develop a program analysis worksheet (PAW):

- list the class learner expectations on the left-hand side of the PAW
- list the type of assessment used for typical students
- determine if the student can achieve the learner expectation as it is
- determine if the student can achieve the learner expectation if the teacher adapts the presentation/ environment, expectations, materials, assistance or assessment
- list relevant IPP objectives; e.g., the student raises a hand for attention, on the right-hand side of the sheet
- the student may be working on fewer learner expectations than other students; highlight these.

Two completed program analysis worksheets are provided in the appendices. One was written for Katie and is based on the Grade 5 social studies program. The other was written for Ivan and is based on the Grade 11 CALM 20 program (Appendices 27 and 28, pages TSD.95–96).

Note: There does not have to be an adaptation under each heading on the worksheet. The fewer adaptations the student needs to achieve the learner expectation, the better.

Program Analysis Worksheet (PAW)

Name ______________________ Date Initiated ______________________

Curricular Area ______________________ Review Date ______________________

			IS IT APPROPRIATE?		MODIFICATIONS	
Class Learner Expectations highlight appropriate learner expectations	Assessment	As Is	With adapted presentation/ environment, expectations, materials, assistance, assessment	Person Resp.	Individual Objectives (IPP)	Assessment — Comments (date achieved)

See footnote reference #32 on page TSD.135

Section III
General Adaptations and Adaptive Techniques

This section provides general and specific strategies for instruction of reading, writing, spelling and mathematics. These strategies augment those provided in Section II regarding varying time, environment, resources, materials and presentation. Also consider information in foundation strategies, Section I, when planning instruction in the core subject areas.

Language Arts

Reading

A first step with all students is actively involving them in reading and comprehending what they read. One process for involving students is outlined below. Note how the suggestions provided accommodate different learning styles. For example, role playing and the use of videotapes accommodate kinesthetic learners, the use of pictures and word analysis strategies accommodate visual learners, listening to music and brainstorming accommodate auditory learners.

- Activate students' background knowledge and prior experience.
  Suggestions:
  - use material meaningful to the students; tap into student interest
  - view pictures on the cover or throughout text
  - ask students, based on the pictures, what they think the story might be about and what might happen next
  - ask students, based on their experiences, what they think about the topic
  - use actual concrete experiences; for example, a walkabout or a field trip.

- Create common background experience.
  Suggestions:
  - view and discuss pictures, films or videos
  - listen to music, poems or stories
  - bring in a guest; have students interview the guest
  - role play, brainstorm, discuss.

- Develop comprehension of the selected reading.
  Suggestions:
  - provide guide questions
  - ask students to predict what might happen; what they based their predictions on; how accurate their predictions were and to form subsequent predictions
  - have students form visual images
  - have students retell the story; act it out using examples from the story
  - use pictures and text to make sense of the reading
  - apply sound-symbol knowledge and word-analysis strategies to aid identification of unfamiliar words in context
  - have students substitute unknown words for words that make sense within the context
  - help students recognize when reading does not make sense to them and have them ask for help
  - provide feedback which will encourage students to be risk takers.

- Consolidate students' understanding of what they have read.
  Suggestions:
  - allow varied responses to the reading, including matching pictures, making a collage, making a tape
  - categorize information in a web or map story elements
  - provide talk time
  - rewrite or retell the story changing story elements; for example, a different ending, a different character, another means of solving the problem
  - express opinions in a journal or learning log, in a newspaper article, in a debate (honour feelings and reactions; prompt for different perspectives)
  - dramatize the story or events
  - map cause/effect or comparison/contrast relationships or categorize ideas as fact, fiction or opinion
  - discuss how illustrations, title and scenes foreshadow events to come.

There are numerous supportive reading strategies. Brief descriptions of assisted reading, echo reading, choral reading, peer reading, taped reading, paired reading and bridge reading strategies follow.

Assisted reading is reading to students and having them repeat phrases or sentences. Eventually, students notice that some words occur repeatedly. At this stage, the teacher should leave out some of the words they think students know and have students fill in the blanks. Finally, students should do the reading and the teacher fills in the words the students have trouble recognizing.

Echo reading is a way of providing direct assistance. While pointing, the teacher reads phrases or sentences and the student then points and repeats (echoes) what was heard. After a session with the teacher, the student practises with a tape recorder using the same process. When the student feels he or she has mastered the reading, the student reads it to the teacher.

Choral reading is reading aloud in unison. Because it is somewhat harder to choral read than to echo, the teacher may want to preview or echo read the material. Choral reading, with the teacher's voice leading, is a good way to practise oral reading without the anxiety of a solo performance. Tapes can be used for independent practice.

Peer reading involves students getting together to choral read books in pairs or small groups. Because of previous modelling by the teacher, students tend to accept each other's miscues which creates a low risk, supportive situation. Sometimes, more mature readers will take the lead or help others. *Beyond Storybooks: Young Children and the Shared Book Experience* is a practical hands-on book for teachers working with at-risk readers in the early elementary years. It is available from the International Reading Association, 800 Barksdale Road, P.O. Box 8139, Newark, Delaware, 19714–8139.

Taped reading is valuable for familiarizing students with a story, reinforcing independent practice, helping students learn to attend and exposing students to literature. Some students learn to read stories by listening to them on tape while following the text in the book. This strategy is not particularly effective with students who do not attend to print as they listen.

Paired reading involves two students or a student and an adult. One is a skilled reader and one needs to strengthen skills. They read a passage aloud together and the less-skilled reader learns to develop a reading rhythm and to read for chunks of meaning. Over time, the pairs develop signals and the less-skilled reader can signal that he or she wishes to read alone. The skilled partner can provide help if needed. *Paired Reading: Positive Reading Practice* by Anne Brailsford, et al., a training video with accompanying manual, is available from the Learning Resources Distributing Centre.

Bridge reading provides a bridge between the student's experience with language and written language by pairing words with word pictures and gestures. It involves teaching students the left to right eye movements, to read lines from top to bottom and a sight vocabulary to give them access to beginner reading books. It helps students manipulate language by helping them build their own sentences, change other students' sentences and produce original material. The *Bridge Reading Kit* by A. Dewsbury, J. Jennings and D. Boyle is available from OISE Press, Scholarly Book Services Inc., 77 Mowat Avenue, Suite 403, Toronto, Ontario, M6K 3E3.

Writing

It is possible to read without having written but not to write without having read. Writing involves reading and rereading what is on the page. Developing effective readers is a productive writing strategy.

Another strategy with potential for reluctant writers is shared or collaborative writing. It involves the reluctant writer sharing the writing process with a teacher, another student or a group of students.

The following is a typical instructional sequence:

1. The teacher explains to the student that they will be writing a story together and that the story should sound as if it were written by one person.

2. The student and teacher discuss a choice of topic. The student decides on a topic.

3. The student contributes a first sentence. The teacher reads the sentence aloud, adds a sentence and explains how it connects to the first sentence.

4. The student and teacher alternatively contribute sentences, stopping occasionally to read the entire story before adding a sentence.

5. The student and teacher together read the completed story.

Spelling and punctuation are not emphasized in a first draft. However, the teacher models correct practice throughout the process. For example, the teacher, by correctly spelling a misspelled word from the student's sentence in his or her sentence, provides a model of correct spelling.

Some variations for consideration, depending upon the skill level of the student, include:

- the teacher writes the first sentence
- the teacher stipulates sentence complexity; e.g., only simple sentences or at least one compound sentence
- the teacher models a particular type of sentence; e.g., complex
- alternating words or paragraphs instead of sentences
- varying partners; e.g., another student, a group of students, another adult (volunteer, aide).

Consider the suggestions provided in the following two charts. The first is for assisting students with penmanship deficits or with fluency and organization problems and for providing supportive assessment. The second offers suggestions for providing assistance with word recognition.

Suggestions for Providing Assistance with Penmanship and Writing

Problem	Strategies
Difficulty forming letters	• Have students trace the alphabet for motor memory. • Make sure students are using appropriate-sized writing tools. • Anchor papers to the desk with tape or have students use clipboards. • Allow them to use newsprint, felt tip pens, magnetic letters, unlined paper or larger paper. • Provide them with access to typewriters or word processors. • Allow oral reports, dictated or tape-recorded assignments.
Fluency and organizational problems	• At first, keep writing activities brief and varied; for example, two-or three-sentence stories, a note to a friend or grandparent, a shopping list, a sentence or two a day in a journal. • Provide them with sentence starters and organizational outlines (for samples see Appendices 29–32, pages TSD.97–100). • Provide a list of transition words, such as: finally, next, first, second, after, because, if, but, in summary. • Review and post rules for capitalization and punctuation. • Generate ideas for writing: who, what, when, where and why questions. • Provide examples of completed assignments so students can see what a good product looks like. • Display the writing assignments on a board and include visual clues.
Assignments with multiple errors	• Avoid correcting every error; instead focus on one error at a time. • Place an X in the margin and have students find their own mechanical errors. • Pair students to proofread each other's work.

Suggestions for Providing Assistance with Word Recognition[4]

Problem Area	Strategies
Familiarity with letters and graphemic awareness	• Read and make up rhymes and alliterative phrases/sentences, tongue twisters. • Listen to and repeat text that plays with language. • Use alphabet games and puzzles that involve matching and naming letters. • Find letters in the text being read out loud in class lessons.
Concept of words	• Read, pointing to or unmasking words as they are read. • Find certain words, match word cards to words on a chart, frame words, circle words, point to words. • Print sentence on a strip and word cards, match the words to the sentence strip. • Cut words from the sentence strip, rearrange and read, arrange in different orders and read. • Collect students' own interest words on cards, in personal dictionaries, on tagboard strips taped on desks.
Sight words	• Match printed sight words to words in charts, books or students' own writing. • Find specific sight words in charts/stories; e.g., ask students to locate "was," have a "word of the day" that they look and listen for during the day's activities. • Add frequently used sight words and students' "interest" words to their own dictionaries or cards (personal collection); these can be used in games and referred to when writing. • Use sentence scramble — using familiar and unfamiliar words, print sentences on cardboard strips, have students cut them into words, scramble, make new sentences and read. • Encourage easy reading for enjoyment, reread stories during independent reading time. • Use repeated reading — reread the same short story or passage three times to increase fluency. • Teach students how to visualize words. • Have students write frequently. • Have games using sight words chosen from classroom reading activities for students to use: bingo, fish, memory.

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[4] From *Reading instruction that makes sense* (pp. 81–91), by M. Tarasoff, 1993, Victoria, BC: Active Learning Institute. Adapted and reprinted with permission.

Suggestions for Providing Assistance with Word Recognition (cont'd)[4]

Problem Area	**Strategies**
Context clues	• Predict and sort — predict words that may be found in a reading selection or used in a theme study, sort into categories, show relationships. • Reread stories and sing songs so the language becomes internalized (memorized), encourage "chiming-in" with familiar and repetitive language structures, expected word order and vocabulary.
Phonics	• Teach students to use phonics clues along with context clues by encouraging them to say the initial sound and last sound and to keep reading or rereading. • Demonstrate how to blend sound to approximate pronunciation of new words as they read; e.g., using letter tiles or cards, have students say the sound of the first letter as it is moved towards the next letter, and as it touches the second letter, blend that sound with the first, then extend the sound to next letter. • Do word study; e.g., match words to picture cards based on initial and final sounds, find the word in the text or book when given the spoken word, compare word families and rhyming words, sort and classify words according to spelling, make words from letters; e.g., how many words can be made from the letters "p o s t r"?
Syllabication and structural analysis	• Choose words or have students brainstorm or find words from stories, texts and their lessons. • Sort into patterns, create charts, generalize to other words as they surface in other activities, continue to search for similar words and add them to charts. • Model how to decode new words by referring to what has been discussed and studied already. • Model how to determine meaning by using roots, endings, affixes and combining forms. • Before reading a selection, brainstorm relevant words or have students scan text for new multisyllabic words, list, discuss and decode. • Use these words in other word study such as spelling lessons.

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[4] From *Reading instruction that makes sense* (pp. 81–91), by M. Tarasoff, 1993, Victoria, BC: Active Learning Institute. Adapted and reprinted with permission.

Spelling

Spelling, in addition to the fluency and organization skills touched on previously, is an important writing skill. A good starting point with students experiencing difficulty spelling, is to analyze the type of errors they typically make. Typical errors are categorized as follows:

- omissions and insertions
- letter substitutions
- confusions from mispronunciations
- transpositions
- doubling
- derived word endings
- homonyms
- phonetic spelling
- unclassified.

Examples of these types of errors, probable causes and suggested corrective procedures are provided in Appendix 33, page TSD.101.

Additional suggestions for helping students include:

- Carefully choose the words to teach, modifying the number of spelling words for some students. To guide selection consider:
  - words most frequently used in general communication, see Appendices 34 and 35, pages TSD.105–106
  - words most frequently misspelled, Appendix 36, page TSD.108
  - words students are motivated to know
  - words that facilitate functioning in the classroom
  - words from student's own writing.

- Use a variety of activities:
  - use computers for spelling practice and checking spelling
  - teach basic roots, suffixes and prefixes
  - teach the cover-and-write method in which the student writes the word twice while looking at it, covers the word and writes it and repeats the process
  - have students develop their own word search puzzles, making use of anagrams, scrabble and magnetic letters
  - use the tape recorder to have students practise hearing the word spelled
  - have students write the word in the air
  - use different colour markers for silent letters
  - teach some spelling rules, see Appendix 37, page TSD.110 for rules
  - encourage students to use a buddy system for proofreading each other's work
  - use visualization techniques such as having students close their eyes, visualize a picture, associate word with picture, or having students draw a picture and write letters on the picture.

- Target strategies as required:
  - if the student has a visual-motor problem, let him or her take the test orally
  - if the student has a learning disability, the visual has to be augmented through the support of other senses
  - if the student confuses letters, such as "b" and "d," the student can benefit from a multi-sensory approach using materials such as play dough, pipe cleaners and sandpaper.

Mathematics

General Strategies

Mathematics is a language with oral and written symbols that communicate mathematical ideas. Mathematics and language arts are linked and language arts strategies can be used successfully in developing and understanding mathematics. For some students, the vocabulary level of instructions and problems may be as much a hurdle as the mathematic concepts themselves. Understandably, strengthening reading skills can help students with mathematics but there are also other less-apparent connections. For instance, mathematical concepts can be enhanced by the use of number stories, counting books, role plays and the creation of books illustrating concepts such as big and little, in and out, or up and down. Additional strategies related to language usage, process and presentation follow.

To assist students who struggle with reading and writing skills:

- rewrite some of the instructions and problems in simpler language
- point out key words and explain the relationship between the words and mathematical operations; for example, "altogether" may indicate addition and "left," as in "how many left," indicates subtraction
- minimize or eliminate copying from a textbook or the board by providing handouts or having a peer help copy
- have students do mathematics on the blackboard.

To help students who have difficulty remembering general instructions and problems with spacing:

- have students repeat instructions to the teacher or a peer
- reduce the number of problems on a page
- use grid paper or paper marked off in squares
- leave instructions on the board for easy reference or provide them on a tape recorder for review as needed
- use cues such as a green line on the right side of the page to remind students where to start; or boxes, circles and lines to separate one problem from another and to help students stay within boundaries; or turn lined paper to provide perpendicular columns
- develop mnemonics or cue cards of the steps for various operations and affix these to the student's desk, or provide cue cards to students as required.

Sample Mnemonic

BEDMAS is an mnemonic to help students remember the order of operations in a multi-step equation.

B brackets
E exponents
D division
M multiplication
A addition
S subtraction.

Sample Organizer

Using a lattice as background for a mathematics operation can help students keep their work organized. The example below shows all the partial products for 37 X 46.

Thousands	Hundreds	Tens	Ones	
		3	7	
	X	4	6	
		4	2	= 7 x 6
	1	8	0	= 30 x 6
	2	8	0	= 7 x 40
1	2	0	0	= 30 x 40
1	7	0	2	= 37 x 46

Vary the presentation to help students with different learning needs. Suggestions:

- use visuals and manipulatives to illustrate new or revisit old concepts; for instance, use beans, blocks and counters to teach counting; dot-to-dot, sorting boxes, cut-and-paste or touch-and-trace activities
- use real-life situations to provide word problems; for instance, how many or which coins would a student need to buy a coke and chips at the corner store?
- set up a class store, bank, post office or newspaper office and devise activities to practise mathematics concepts
- provide sample problems on charts or provide solutions on charts and tape recorders
- use colour coding; for instance, ones in red, 10s in green, etc.
- allow use of calculators

- reinforce mathematic concepts in other contexts; for instance, when students are setting up chairs, in discussions about the weather, when attendance is taken, or when measuring in cooking class or in science activities
- use games such as dominoes and Hungry Hippos (more-less)
- use cards for practising number facts and multiplication
- develop and use mathematics vocabulary
- use the computer for introducing concepts, for additional practice and for monitoring student progress. For information on integrating computers in the Division II and III mathematics curriculum see *Computer Integration Guide: Grades 4 to 9 Mathematics*, (1990): Alberta Education, Curriculum Branch.

Sample Cue Cards

Rounding Numbers (to the nearest hundred)

Procedure	Example
1. Locate the digit in the 100s place.	8̲76
2. Look at the digit to the right of the 100s digit.	8̲76 –
3. If this digit is 4 or less, the 100s digit stays the same. If this digit is 5 or more, the 100s digit is increased by 1.	9̲
4. Put zeros as place holders in the 10s and 1s place.	**900**

Rounding Large Numbers (to the nearest hundred)

Procedure	Example
1. Locate the digit in the 100s place.	374 8̲36
2. Cover the digits to the left of the 100s digit with your finger.	374 8̲36
3. Look at the digit to the right of the 100s digit.	374 8̲36 –
4. If this digit is 4 or less, the 100s digit stays the same. If this digit is 5 or more, the 100s digit is increased by 1.	374 8̲
5. Put zeros as place holders in the 10s and 1s place.	374 **800**

Strategies Linked to Specific Deficits

Specific Deficit	Strategies
One-to-one correspondence	• Have students match napkins to plates, snacks to children, dogs to bones on gameboards, etc. • Students should start with concrete materials and progress to pictures, etc.
Seriation and ordering	• Work with real items. Students can order blocks by length, buttons by size, jars by capacity, objects by weight, ribbons and strings by length. • Students can order by sight and feel, and then check and confirm by direct comparison to objects and gradually progress to comparing by measuring.
Number concept	• Use counting games, such as counting pennies as they are dropped into a jar, counting the number of times a ball is bounced. • Have students put counters on gameboards according to oral directions or to match the numeral. • Prepare a counting tape and have the student count out the appropriate amount, repetitions can be provided for easily.
Classification	• Use attribute blocks to introduce sorting by one characteristic. • Have students sort themselves according to a characteristic chosen by the teacher or student. • Have students sort collections of bread tags, keys, buttons, etc. • Tell riddles so that students can use clues to identify one from a group.
Visual spatial ability	• Have students copy simple designs made with pattern blocks, beads, etc. • Have students create a simple design on one geoboard, copy it to a second geoboard and then to geoboard paper. • Read books such as *Rosie's Talk* by Pat Kutchins and have the students show Rosie's route around a farmyard gameboard.
Problem solving	• Have students identify and extend patterns of shape and number and then create similar patterns. • Have students use diagrams, objects and counters to act out and solve mathematical problems. • Have students use reasoning and logic to solve mathematical problems involving structures such as Venn diagrams, tables and analogies. • Have students create mathematical problems from classroom and other familiar situations.

Other references:

SAIL Through Mathematics Program by Richard Skemp. The program provides games and activities for teaching mathematics concepts. The resource contains Canadian content and is available through the Learning Resources Distributing Centre.

Box Cars and One-eyed Jacks by Joanne Currah and Jane Felling. This series has six volumes of mathematics and spelling games for Grades 1–9. A French version of Volumes I-III is also available. Concepts should be taught first and then the games and activities can be used to provide a motivating way for students to practise their skills. The series is available from Box Cars Inc. Telephone (403) 440–6284.

MathWorlds, Reidmore Books, Grades 3–6, authorized by Alberta Education. The storyline of each module presents a natural series of problems or challenges through which mathematics skills are mastered. It is highly motivating and students get into character. Modules include Trading Post, The Factory, Collector's Clubhouse, Underwater World, Fire Hall, etc. It is available from the Learning Resources Distributing Centre.

Resources by Mary Baratta-Lorton published by Addison-Wesley (1–800–387–8028):

- *Workjobs* and *Workjobs II*: Each of these books has an easy-to-use format with lists of skills and materials needed, notes on how to start, illustrative photographs and follow-up ideas. *Workjobs* includes sets, number sequences, combining and separating groups, relationships, perception, matching, classification, sounds and letters. *Workjobs II* explores numbers, combinations and relationships between numbers. ECS–Grade 2
- *Mathematics Their Way*: uses a discovery and exploration approach to develop mathematics understanding. ECS–Grade 2

Section IV
Strategies by Categories of Differences

Strategies in this section are grouped according to three broad categories: learning disabilities, behaviour disorders and gifted and talented. This does not mean the strategies are only useful for students in the stated categories nor does it mean that strategies listed in other sections may not be helpful. For instance, strategies regarding varying time, environment and resources and strategies related to prosocial skills and learning styles clearly apply. Peruse the entire document to help create a unique fit among teacher characteristics, student need and the strategies used.

Additional information and strategies are provided in the following documents:

Behavior Disorders in Schools: A Practical Guide to Identification, Assessment and Correction (1986) by Alberta Education.

Teaching Students with Learning Disabilities: Classroom Strategies (to be released by Alberta Education Spring 1996) – Book 6 in the *Programming for Students with Special Needs* series.

Teaching Students Who are Gifted and Talented (to be released by Alberta Education Spring 1997) — Book 7 in the *Programming for Students with Special Needs* series.

For additional resources for special education, consult Alberta Education's *Resources for Special Education & Guidance and Counselling: an Annotated List* available from the Special Education Branch.

Learning Disabilities

General Strategies

Students with learning disabilities vary according to age, achievement level, learning style preference, behaviour and the extent to which the disability affects the student's learning. Again, like all students, these students have unique talents and areas of strength. Suggested strategies are provided in the order that this book is organized: general strategies, core area strategies and strategies tied to specific impairments.

The following are general modifications for assisting students with learning disabilities:

- provide structure and clearly stated expectations
- encourage self-monitoring, proofreading, self-correction

- allow students to tape classroom lectures or discussions and to copy or use another student's notes, or provide them with class notes; students receiving the notes are responsible for highlighting the key words, sentences and sections
- provide major assignments in written or tape-recorded format
- accompany oral classroom directions with written ones, provide directions on cassette for easy reference, repeat directions to a student and have the student explain them in his or her own words
- allow assignments to be printed, typed, written by a scribe or put on cassette; don't return handwritten work to be recopied
- provide access to computer, spell checker and calculator
- provide access to read-along notes or texts
- help a student develop study skills such as note-taking, outlining, mind mapping
- set up a buddy system
- use cross-age tutoring.

The following are general modifications for assessment of students with learning disabilities:

- provide quiet space for writing exams
- tape the questions
- provide extra time for writing tests and assignments
- focus on student's correct and acceptable work, not his or her errors
- provide opportunity for oral response on tests
- provide credit for student's participation in class
- point out reversals and transpositions of letters and numbers for correction but don't mark them wrong
- provide frequent positive feedback. It's important to attend to the student's affective needs.

Use of Tape Recorders

Because the use of tape recordings plays a significant role in the provision of instruction for students with learning disabilities, it is important to have some guidelines:

- **Edit. Edit. Edit.** Keep it simple. Avoid information overload. Simplify language.
- **Teach.** Model good communication. Provide summaries, examples or guide questions where appropriate.
- **Motivate.** Select material with the student's interests in mind. Entice with an exciting introduction or involve the student through questions and foreshadowing.
- **Facilitate.** If the student is reading along while listening, indicate on tape if sections are left out on the tape.
- **Use Volunteers.** Service organizations, seniors, students and others are sometimes willing to prepare tapes.

Reading Strategies

In addition to the strategies related to reading identified in Section III, the following suggestions may be appropriate in some cases:

- record text selections that the student can comprehend but may not be able to read
- use visual aids to present or reinforce concepts from the reading selections
- use cooperative learning, group projects or peer tutoring
- provide summaries of reading assignments
- underline key concepts in social studies, science or other texts
- make use of a reading program that has been used successfully with students who have learning disabilities. A description of one such program is provided in Appendix 38, page TSD.111.

Spelling Strategies

A list of techniques that can be used to help students spell is provided in Appendix 39, page TSD.112. In addition to strategies related to spelling in Section III, the following suggestions may be appropriate for students who have major deficits in spelling skills:

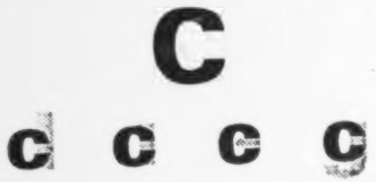
- limit the number of spelling words required
- select words that are required for success in other courses of study
- help students develop a personalized spelling dictionary
- minimize spelling as a criterion for evaluating assignments
- allow opportunity for self-correcting errors and provide opportunity for a post test
- allow students to phonetically spell words
- advise students to use a spellchecker on the computer.

Handwriting/Penmanship Strategies

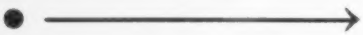
Refer to strategies provided in Section III, page TSD.18. Introduce students who are dysgraphic to the computer or typewriter at the start of their schooling. In addition, consider the following strategies:

- emphasize proper posture, that is, feet on the floor and elbows supported
- teach students how to hold a pencil and to place the paper properly
- guide students through the formation of letters, allow them to trace or cut out letters, provide them with model letters, have them write on a chalkboard, write large, write in play dough and write with a long ruler in the air

- teach letters of similar strokes together; for example, *c, d, e, g, o, q*



- provide cues; for example, a red dot to indicate where a word should begin, an arrow to indicate direction



- use the concept of one finger space between words; this can be reinforced on the computer — one word, space bar, one word
- provide alphabet cue card for ready reference for students.

Proper placement of paper is particularly important for left-handed students. They often write in a manner which obscures the letters soon after they are produced. Such students never see an entire word that has been written until glancing up at a previously written line and spelling can become a problem. Have such students watch another left-handed student write with the hand under the letters. The paper must be tilted. It also helps to hold the pencil higher above the tip than a right-handed student would.

Mathematics Strategies

Strategies provided in Section III are helpful for students with learning disabilities. Some additional strategies to assist mathematics learning for students experiencing difficulty follow. Although specific examples are described, the strategies can apply to mathematics learning at different grade levels.

Focus on understanding and using patterns
Patterns are evident in mathematics at all levels. If students are given opportunities to identify and use patterns of shape and number in the early years, patterns can become a tool for examining new concepts and skills.

Simple patterns such as A B C, A B C . . . are found in skip counting by fives, or the ones, tens and hundreds of numeration. Students benefit from examining number patterns on the "Hundreds Board" or the monthly calendar.

Focus on using mathematical properties
As new concepts are introduced, students are better able to learn and apply their learning if the new concepts are related to the big ideas of mathematics such as the commutative, associative, order and distributive properties of numbers.

If students know that 2 + 3 = 3 + 2, they are able to apply this property to the set of addition facts, reducing the number of facts to be learned by half. The commutative property of number applies to multiplication facts as well.

Focus on using manipulatives or models

Students should use appropriate materials and models to help solve problems and develop an understanding of mathematical concepts and processes. Counters, geometric solids and number lines are appropriate models for students in the early years. Students working on Grade 3 or 4 mathematics concepts can use base-10 materials, money and the abacus to physically model mathematical operations such as addition or division. Models of fractions can help students understand the concept of equivalent fractions or the comparative size of fractions.

Focus on using thinking or remembering skills

Mnemonics can be used to remember procedures for complex operations. When learning the process of long division the mnemonic "Does McDonalds Sell Burgers" can be a reminder for students to divide, multiply, subtract and bring down. Prior use of materials such as counters, base-10 materials and money is necessary to develop understanding of the division process and algorithm.

Developing recall of basic addition or multiplication facts is more efficient when students focus on a small group of facts. This group of facts is associated with a remembering strategy that is the conceptual anchor as students are developing their skill. One suggested sequence for teaching addition facts is to focus in turn on doubles, doubles plus one, adding zero and one, adding nine (add 10 and take one) and then the 10 remaining number facts. The goal is for students to have recall of the facts without hesitation.

For teaching recall of multiplication facts, a sequence such as doubles, fives, perfect squares, nines and the last 10 facts can be used. A variety of games using number cards and dice can provide practice of the basic number facts. For games and activities, refer to *Box Cars and One-eyed Jacks* and the *SAIL Through Mathematics Program* described on page TSD.30.

When learning to calculate with addition or multiplication, students who do not have a good recall of basic facts can be inhibited. If these students have access to a chart of addition or multiplication facts, they will be able to focus on the new procedure they are learning.

Focus on using the calculator

The calculator, using the constant addition feature, can be used to teach the concept of multiplication as repeated addition. For example,

$$5 \times 7 = 7 + 7 + 7 + 7 + 7$$

It can also be used to reinforce number concepts such as place value, number properties and estimation. It provides the students with the tactile experience that accommodates the learning style of many learners in the early grades. Students can confirm their answers because the calculator provides immediate feedback.

Students can roll a die, add base-10 blocks to a set and trade if possible as they try to reach the target of 100. The calculator can be used to confirm the running total displayed by the blocks.

Some students have difficulty entering the numeral for numbers written in words on a calculator. Provide these students with numbers that spell words when the calculator is rotated. For example, *807* spells *LOB* and *55079* spells *GLOSS* when the student turns the calculator upside down. Any words made up of the letters B, E, G, h, I, L, O, or S work:

0	1	2	3	4	5	6	7	8	9
O	I		E	h	S		L	B	G

Students can develop estimation skills and understanding of multiplication (or division) of decimals by playing an activity such as "Target Numbers" where students in turn multiply (or divide) the number on the calculator display to get within one of the target.

Focus on constructing a book of definitions and examples

Many students learn more effectively if they make notes and keep written records of definitions and examples of questions solved. These learning logbooks can be used as reference when doing home assignments or studying.

Specific Impairments Strategies

A number of specific impairments and related strategies are identified by Joan Harwell in the *Complete Learning Disabilities Handbook*. The chart on the following pages represents an abbreviated list, including some modifications.

Strategies Linked to Specific Deficits[5]

Problem	Strategies
Lack of attention to visual detail	Provide a variety of comparison experiences involving careful distinction of size, shape, colour, direction, etc.
Need for diminished light on work surface, particularly with fluorescent lighting	Provide a variety of transparent plastic overlays and allow the student to select the colour that works best. Use plastic colour overlays for wall charts, alternate colours make it easier for students to find their spot when copying. Allow students to wear visors or lightly tinted sunglasses in class. Remember that light reflects off laminated wall charts making them difficult for students with visual impairments to see.
Difficulty copying accurately	Minimize the amount of copying. Have students read passages orally several times before copying. Allow students to use a "caret" (^) to insert omitted words.

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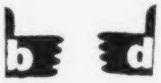
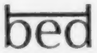
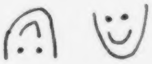
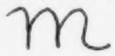
[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Strategies Linked to Specific Deficits (cont'd)[5]

Problem	Strategies
Reversing letters and numbers	Focus the student's attention on the letters and numbers that are troublesome; for instance: • use pictures • sound relationships • tape a number line or letter strip on the student's desk • for b/d confusion, have the student use a fist and thumb reminder (left hand for "b" and right hand for "d" with fist facing inward)  or bed  strategy • for n/u reversal, say letter u is like a chin  • for m/w confusion, talk of going over the mountain three times for m  • practise writing letters in play dough disks made by pressing play dough or modelling clay in ice cream container lids.
Confusing words that are similar in spelling (common offenders include: saw/was, on/no, there/three, being/begin/bring, through/though/thought)	Teach students to consider the context in which word is used and demand sense from what they read. Drill students on the most common offenders. Drill on tracking from left to right: e.g., was saw on no. → → → (say sounds in the order that they are seen) Practise troublesome words with rubber letters.

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[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Strategies Linked to Specific Deficits (cont'd)[5]

Problem	Strategies
Visual figure-ground deficits	When students lose their place, use a marker, finger or eraser end of pencil when reading. When students are distracted by movement in the room, minimize movement, provide the student with a carrel/divider, allow the student to work in the hall. When students have difficulty seeing the central theme of a picture, advise them that illustrators put the central theme in the foreground; in the most prominent part of the picture. When students have disorganized workspace, provide places for all necessary belongings.
Visual closure and visual association deficits (students who have difficulty supplying a missing letter; e.g., h_lp or fr_end; student cannot supply the "e" or the "i")	Have students systematically mispronounce words with offending letters, for example "fry end" for friend so they can hear the silent "i". Have students say letters orally and use their bodies (tap head when they say "a" and touch their eye when they say "i"). Kinetic method helps some students. Have students say a word such as "blip" for fill in the blank words as they read sentence aloud. Generally they can say the correct word when they repeat sentence, for example, "The Queen had a (blip) on her head."
Visual perceptual deficits	Have students read with a finger, marker or eraser end of pencil. Highlight the most important idea in one colour and the supporting details in another. Allow student to read with one eye at a time. Allow student to rest eyes frequently. Have someone read to the student or put material on tape so the student can listen as needed.

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[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Strategies Linked to Specific Deficits (cont'd)[5]

Problem	**Strategies**
Too many erasures	Suggest that students put a line through errors rather than erasing. Use white out (Note: Use of white out may be a health hazard for some students). Recommend that the student spend more time planning and preparing to write.
Difficulty cutting or pasting	Use glue sticks. Have students turn the paper as they go rather than hold scissors at odd angles. Use heavier paper which is easier to cut. Make use of electric scissors.
Difficulty throwing and catching a ball or jumping rope	When throwing a ball, have students keep their eyes on the ball's final destination. When catching a ball, have students keep their eyes on the ball. Remind students that jumping rope is a matter of rhythm rather than watching the rope.
Auditory processing deficits (cannot process what is said at regular speaking speed)	Repeat instructions several times, word differently, or tape record, enabling student to listen as often as necessary. Provide the information visually as well as orally. Reduce background noise. Have students repeat instructions out loud. Use a buddy system, enabling student to check specifics as required.

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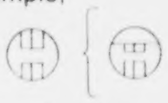
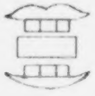
[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Strategies Linked to Specific Deficits (cont'd)[5]

Problem	Strategies
Auditory discrimination deficits (difficulty discriminating between sounds such as p, b, t , d, g, c, l; the vowel sounds e and i; and the final consonants m and n)	Have students practise various sounds in front of a mirror, enabling them to see the shape of the mouth when making the sound. Encourage students to watch the lips of the speaker. Provide the students with pictures as a reference; for example,  drop jaw  squish between teeth Show students how to place their tongue to make the "l" sound.
Auditory figure-ground deficits (normal hearing but conflicting noises make it difficult to attend to primary sound)	Support the oral with written notes on blackboard, on charts or overheads. Provide student with notes. Encourage a quiet classroom when instructions are given or new concepts explained.
Inappropriately persevering with an action; for example, laughing longer or louder than necessary	Have a cue such as placing a hand on the student's shoulder to indicate it is time to stop; fade to a soft touch, then a look.
Poor coordination of the large muscles	Provide a structured exercise program, preferably daily.
Poor sense of direction	Provide walks about school at the beginning of a school year and point out details such as the numbering system on classroom doors. Talk about directions throughout the tour and provide relationship to the total picture. Teach map-reading skills. Have the students develop a map of the school and a map of the immediate neighbourhood.

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[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Strategies Linked to Specific Deficits (cont'd)[5]

Problem	**Strategies**
Accident prone	Train students to be aware of their surroundings by talking them through activities (ask, where is your finger? before they use a knife, scissors or saw) or setting up an obstacle course for student to walk through.
Lack of language development or experience	Provide guided experience in language and conceptual development through classroom lessons, audiovisual experiences and field trips. Model language. Do not continually question; for instance, sometimes tell students the answer and then ask the question. Use visualization and verbalization activities to check understanding.
Long-or-short-term memory deficits	Teach phonics. Have students use bypass techniques; for example, if after several tries the student cannot memorize the multiplication tables, let the student use a calculator. Have students relate new information to known or familiar information. Have students use acronyms to help with spelling. Provide many tactile experiences.

The Alberta Education document *Teaching Students with Learning Disabilities: Classroom Strategies*, Book 6 of the *Programming for Students with Special Needs* series provides additional suggestions. The document is scheduled for distribution in Spring 1996.

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[5] From *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Adapted and reprinted with permission.

Managing Behaviours in the Classroom

The school and classroom climate have a significant impact on student behaviour. Preventing inappropriate behaviours is preferable to correcting them, so establishing a healthy climate is the logical starting point of a behaviour management strategy. This section begins with suggestions for classroom behaviour management, including examples of rules, types of positive feedback and suggestions for assessing the management plan in place. These suggestions are followed by preventative strategies, strategies for working with students with attention difficulties, as well as commonly used behaviour modification strategies.

Classroom Management

The goal is to establish a climate of trust and respect for individuals which is conducive to learning. Generally, a behaviour management plan involves the following:

- establish simple, positive expectations or rules (see Appendix 40, page TSD.113)
- ensure that students understand the expectations or rules; may include posting rules in appropriate classroom locations or role playing situations
- establish, with student input, logical consequences if the expectations are not met (common pitfalls in administering logical consequences are provided in Appendix 41, page TSD.114)
- provide positive feedback when expectations are met
- apply consequences fairly and consistently
- make use of prearranged verbal and non-verbal cues to get students' attention such as "please listen" or blinking the lights
- scan or move about the classroom to keep in touch with all students
- elicit the cooperation of peer leaders in establishing classroom climate
- examine programming variables such as pace, appropriateness of objectives and resources or variety of presentation
- vary responses depending on the cause; for example, attention seeking, revenge; or the severity; for example, breaking a rule, intimidating other students.

Positive Feedback

Natural consequences, attention and praise are often the most powerful reinforcers. Activity or tangible reinforcers might help motivate students to behave differently. When selecting reinforcers remember that they should:

- be age appropriate
- appeal to the student in question, because what is reinforcing to one student may not be to another
- fit into the ongoing classroom and school program as much as possible
- be used when expectations are met; praise is most effective when tied to feedback regarding performance on a specific task.

Consider asking the student what he or she feels is an appropriate reinforcer, or allow the student to select from a teacher-compiled list. Examples of statements of praise and encouragement, of natural reinforcements including activities and of tangible reinforcements are provided in Appendix 42, page TSD.115.

The following questions can be used to help assess the behaviour management plan in place. They are based on questions suggested by Vernon Jones[6] in an article entitled *Assessing Your Classroom and School-wide Student Management Plan*.

- Does the plan treat students with dignity?
- Does the plan include opportunities for students to learn new skills, to acquire a repertory of acceptable responses to frustration, teasing, etc.?
- Are the consequences appropriate to the violation?
- Does the plan include periodic reviews or allow for the review of programming (including seating arrangements) that may be contributing to behaviour problems?

Preventative Strategies

The emphasis is on rational, non-judgmental, low-key responses. Try to maintain a positive attitude and avoid reinforcing attention-seeking behaviour.

Some tips include:

- Listen to what the student is really saying.
- Ignore challenge questions (suggestions for preventing escalation and an example of how behaviour is escalated follow these tips).
- Intervene early by focusing on the problem, not the student.
- Use non-threatening verbal and non-verbal clues to let students know their behaviour is getting out of hand; for example, make eye contact, move next to the student, or calmly mention a name.
- Allow the student to move to a less-taxing task or to leave a group or the room.
- Prepare students for changes in routine or transitions from one activity to another.
- Gear actions and responses to knowledge of a student; for example, respect personal space, be aware of body language clues, permit some verbal venting.
- Check your own emotional state and responses.
- Use humour.
- Work at understanding the behaviour and its root cause.
- Teach skills of listening, organization, following direction, responding, etc. A checklist is provided in Appendix 43, page TSD.116.
- Make certain a student does not lose face. For instance, talk to the student quietly and privately rather than in front of peers. See Appendix 44, page TSD.117 for a behavioural interview process.

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[6] From "Assessing your classroom and school-wide student management plan," by V. Jones, 1993, *Beyond Behavior*, *4*(3), pp. 9–12. Adapted and reprinted with permission.

Prevent Escalation of Acting-out Behaviours

The responses a teacher provides can, on occasion, exacerbate rather than diffuse a situation. Geoff Colvin, in "Managing Acting-Out Behaviour," emphasizes the importance of identifying the steps leading to escalated behaviour, of anticipating the student's response and providing a different response, of helping the student manage frustration or agitation and gain self-control and finally, of teaching the student alternative behaviours to replace his or her inappropriate ones. A slightly modified example of a chain of escalated behaviour from Colvin's article follows.

Chain of Escalated Behaviour[7]

Teacher	Student	Behaviour
Michael you need to start on your assignment.	What assignment?	Questions
The work you didn't finish during class.	I did finish it.	Argues
Well let me see it then.	I don't have it now.	Continues to argue
You will either have to do it again or show me it.	I am not going to do it twice. It's not fair.	Does not comply
You will have to do it now.	Make me.	Defies
If you don't do it now you will have to do it in detention.	F___ you.	Is verbally abusive
That's disrespectful. Office referral.	Throws books on floor; pushes desk over; says I am going to kill you.	Intimidates
That's it.	Grabs the teacher by the wrist, swings at the teacher.	Is physically abusive

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[7] From "Managing acting-out behavior" (p. 81), by G. Colvin, 1992, *Presenter's papers*, Victoria, BC: Focus '92 Conference: Integration a shared belief. Adapted and reprinted with permission.

Instead of getting into a power struggle, defuse the situation. Suggestions include:

- Withdraw from the conflict; ignore the challenge and discuss the substantive issue with the student at another time when conditions may be more conducive to resolution; for example, incomplete assignments can be discussed with the student in the context of an assessment or report card interview.

- Always offer a choice; for example, do you want to work on the outstanding assignment over lunch break or after school? Come in early tomorrow to finish it or complete it at home tonight and bring it in.

- Shift responsibility; for example, I would be happy to help you with your assignment when you are ready to work on it. Remember it is worth 25 per cent of your course grade.

- Make use of humour, make eye contact.

- Be aware of the tone, volume and cadence of your voice; use a calm approach, keep the volume down.

- Be aware of body language; that is, don't encroach on a student's personal space or take an aggressive stance.

The following are commonly used strategies to modify behaviour.

Behaviour contracts or structured reinforcement programs involve written agreements between a teacher and a student and sometimes include an aide, the principal and a parent. Contracts should only be used when the student has a desire to change his or her behaviour and all involved in the contract are willing to cooperate. The contract should target a specific, short-term objective rather than a long-term goal. Steps in establishing a contract include: arranging a meeting with all parties, selecting the specific objective to be targeted, describing the behaviour in precise terms, identifying rewards for demonstrating the target behaviour, writing the contract, getting everyone to review and sign the contract and agreeing when it will be reviewed.

Token or point systems can be simple or complex depending on the age and functioning level of the student. Such systems are most effective when used to correct behaviour related to rules and procedures. As with contracts, a short-term, specific objective such as staying in one's seat should be targeted and precisely described. The student receives a token or point each time he or she performs the target behaviour and the tokens are exchanged for an agreed upon reward. You should discuss with the student what reward he or she is willing to work toward. For instance, a student may wish to be on a school sports team or watch T.V. for a half hour on school nights (see Appendix 42, page TSD.115 for other suggestions). Finally, agree upon the number of tokens or points required to obtain the reward.

For more information, see the subject heading Behaviour Disorders in *Resources for Special Education and Guidance and Counselling: an Annotated List*, from the Special Education Branch, Alberta Education.

Attention Deficits

It is important to know that students with attention difficulties are not wilfully inattentive. It takes inordinate effort from some of these students to keep themselves on task. Some may be impulsive and misread instructions, skip or substitute words while reading, misspell words they can spell correctly or make simple mathematical errors. They may exhibit academic delays. Strategies listed earlier under Learning Disabilities also apply to these students. For more information, see *Teaching Students with Learning Disabilities*, Book 6 in the *Programming for Students with Special Needs* series. Book 6 will be available Spring 1996 from the Learning Resources Distributing Centre.

Developing a profile for each student who exhibits attention deficits is a starting point for selecting programming and behavioural strategies. The chart on page TSD.48 lists some strategies.

Attention Deficits

General Strategies	**Specific Strategies**
Provide structure, order, routine and consistency. These students benefit from a structured classroom environment. This does not mean the teacher should assume total control, rather, find a balance between structure and independence. Exploit the physical aspects of the classroom; for example, seat the student nearby to minimize distractions from other students. Do not place the desk next to a high traffic area such as a window or door. Help the student organize his work space. Recognize the intent of the communication and respond to it. Model and teach appropriate forms of communication. Provide students with the words and behaviours they need in particular situations. Recognize that short, concentrated work periods are more productive than longer time spans. Consider dividing tasks into smaller units. Use a multi-sensory approach; for example, use pictorials or diagrams for concepts. Establish realistic expectations for achievement and organizational skills. Use a variety of assessments; for example, oral tests and multiple choice tests. Prepare students for transitions and changes in routine.	Provide positive feedback as often as possible but do not ignore inappropriate behaviour (unless ignoring is planned and this behaviour is not the target). Provide appropriate, consistent and immediate rewards for specific behaviours. Use a variety and combination of rewards. Avoid excessive verbal directions. Review instructions, pair verbal directions with visual cues. Check for comprehension. Help the student get started with his or her work. Provide periods of physical activity between tasks to absorb restlessness; for example, have the student run an errand, clean the blackboard, put up charts. Give permission to move between activities. Provide extra time for the student to complete tasks. Develop some prearranged private cues to enable the student to signal the teacher privately if he or she needs assistance with directions. Help the student make use of organizational aids such as calendars, checklists, homework books and note-taking strategies. Review these with the student regularly. Help students develop self-monitoring skills; for example, using a finger to keep his or her place in reading, rechecking mathematics problems, checking off each step in the completion of an assignment.

Gifted and Talented

All students have strengths and gifts and should be provided opportunities to demonstrate their highest level of achievement in all curricular areas. However, some students, by virtue of outstanding abilities, are capable of exceptional performance. These gifted and talented students may demonstrate achievement and potential in one or more areas:

- general intellectual ability
- specific academic aptitude
- creative or productive thinking
- leadership ability
- psychomotor ability
- visual and performing arts.

Giftedness may appear in conjunction with other educational or emotional needs such as learning disabilities, behaviour disorders, attention deficits or motor difficulties.

Principles and strategies for modifying programming follow. Consider strategies from other sections as well. Conversely, consider the strategies provided here for other students.

Modifications to programming should:

- be planned and sequentially organized to include specific expectations for growth and development
- be matched to the learning needs of students by building on mastered skills and knowledge
- be broad-based and interdisciplinary to allow for in-depth exploration of concepts
- teach and develop productive thinking skills to encourage reconceptualization of knowledge
- provide learning experiences which encourage problem-solving abilities so that students can move beyond "what is" to "what could be"
- incorporate primary and secondary sources of information as well as numerous technologies
- allow for some individualization, self-selection and self-evaluation to accommodate individual interests and abilities
- incorporate student involvement in planning, selecting, designing and evaluating units of study
- allow for flexible pacing in keeping with the demonstrated needs and abilities of students
- place an emphasis on the integration of cognitive, social and affective competencies within the curriculum experiences
- allow students opportunities to engage in leadership experiences to acquire effective communication and interpersonal skills in group problem-solving situations
- reflect real audiences, issues, problems, themes of substance and meaning to students.

As demonstrated in Section II, varying time, resources and instruction enables programming to be tailored to meet individual needs. Some strategies and sample activities are provided. The length of time it takes a student to master a curriculum area or the time a student can afford or wishes to devote to a curriculum area may vary considerably.

Varying Time and Pace

- Provide experiences earlier.
  Sample activity: completes primary or junior high school mathematics in two years.

- Compact time required for learning experience.
  Sample activity: the time to cover a unit on creative writing is compacted, freeing time to work on a short novel of three chapters.

- Shorten the introduction and practice of skills to provide more time for application.
  Sample activity: decreased practice time in constructing and interpreting picto and bar graphs can be used to create a board game using coordinates.

- Delete the time to cover skills already mastered.
  Sample activity: pretest knowledge of basic facts. Students with mastery can move on to consumer mathematics problem solving. Students proficient in numeration can explore computation using Roman or Mayan systems.

- Provide longer periods of time for individual pursuits.
  Sample activity: the student contracts time to pursue an individual investigation of the sun dial during the class study of time.

- Use flexible scheduling to allow time to work on material at individual levels and pace.
  Sample activity: a student in Grade 2 moves to the year three learning group to work on a science project on the properties of matter during the class study of sink and float.

Varying Complexity of Skills and Content

The content and skills of learning should be more elaborate and complex, and allow for greater depth and breadth of study.

- Integrate high-level thinking processes into content.
  Sample activity: the student pursues the application, analysis, synthesis or evaluation questions on the topic of Ancient Greece. He or she compares characteristics of gods in Greek mythology to gods in Roman mythology and assesses what role gods serve in meeting needs.

- Apply knowledge derived from one discipline in a new area of study.
  Sample activity: knowledge of mathematical patterns can be applied to identify patterns in natural forms, such as shells, waves or flowers. Explore how mathematics is applied to create music.

- Relate learning across disciplines.
  Sample activity: the student extends a study of dinosaurs to one of extinction and investigates the extinction of other animals, endangered species, fads, fashions and music.

- Identify unresolved issues within an area of study.
  Sample activity: examine the issue "Is genetic engineering necessarily harmful" or "Is nuclear power an acceptable risk?" Identify assumptions related to the issue, debate alternative viewpoints, choose a position, build a case to support the position and relate evidence to back the argument.

- Identify unsolved problems within an area of study.
  Sample activity: during a study of Canadian natural resources, the problem of resource depletion could be explored. Gather evidence, propose and carry out a solution.

- Discuss the differences between an issue, theme and problem related to a topic.
  Sample activity: categorize newspaper headlines on a topic into issues, problems or themes. Discuss differences.

- Develop an understanding of underlying concepts, generalizations, principles and theories in a content area.
  Sample activity: a math student researches the history of computing from pebbles to abacus, to calculator, to the present day computer to determine basic principles of a computing system. The student develops new or reconceptualized generalizations and compares or contrasts or explores theories related to time and space continua; e.g., Einstein's paradox of the twins.

- Expose the student to conflicting ideas of the past, future and present to extend and deepen understanding.
  Sample activity: research a section of the Canadian Constitution, the reasons for its inclusion and propose changes for the benefit of today's Canadian society.

- Create opportunities to acquire and apply the basic underlying premises of a discipline.
  Sample activity: research famous scientists and others doing experimental research to identify key aspects of the process.

- Create or generate something new in an area of study.
  Sample activity: survey the community to determine the factors of local pollution. The results are presented in brochures delivered to residents.

- Transfer skills and knowledge into forms considered innovative by criteria set by persons with expertise in a field.
  Sample activity: the student with an interest in architecture pursues the solving of an architectural problem. Through guidance from a mentor, a model construction is built and evaluated.

- Opportunities to explore the frontiers of knowledge.
  Sample activity: the student with computer expertise is given opportunities to research new development, plan and develop a new computer program.

- Understand the role perception plays in the analysis and interpretation of issues and how a personal point of view is developed.
  Sample activity: explore the issue "Are we more independent today than we were 100 years ago?" Take a position on the issue and examine and compare the role of background in determining a point of view.

- Delve into current and local events or real-life problems.
  Sample activity: the student interviews victims of a fire to determine the loss. Decisions are made as to what help the group can contribute.

- Explore ethical and moral issues
  Sample activity: the student determines the best course of action in the following dilemma: the student's friend steals four chocolate bars. His family is poor and the bars are for his sisters. What is the right thing to do?

Varying Resources and Materials

Learning experiences should encourage exposure to, and selection and use of, a wide range of appropriate and specialized resources.

- Extend level and type of resources.
  Sample activity: the student writes to a college professor for information on holography. Other resources could include city and university libraries, the yellow pages, community surveys, individual, personal or telephone interviews and the use of community experts. Review a range and variety of print and non-print resources and analyze for bias and underlying assumptions.

- Recognize relationships and discrepancies between informational sources.
  Sample activity: introduce the various methods by which information is cross-referenced including an index, card catalog, encyclopedia article and a computer index. Gather information from more than three sources in a research project.

- Access and compare data gathered from primary, secondary and tertiary sources.
  Sample activity: chart and compare data gathered on the extinction of the dinosaur. Evaluate the value of information which can be gathered from a fossil, a fossil rubbing, an anthropologist's diary, a journal article and a friend's report.

- Gather information in unusual places.
  Sample activity: identify aesthetic qualities at a wrestling match. Gather data on physical fitness at a symphony performance.

- Develop skill to use advanced information systems technology. **Sample activity:** access information from a laser disc and a specialized library collection.

- Develop the skill and procedures to identify and use the services of an expert in a field. **Sample activity:** interview an employee of Canada Post to gather information on improving the postal system.

- Acquire techniques specific to investigating a particular field of knowledge. **Sample activity:** use the case study experimental approach to gather information on the issue "Must you be a friend before you have one?"

- Provide opportunities for information gathering beyond the school. **Sample activity:** the student interested in a law enforcement job shadows a policeman.

- Provide advanced resources and materials. **Sample activity:** the student participates in an independent reading program. Literature selections at higher levels are available and individualized follow-up activities are planned.

Varying Nature and Kind of Instruction

Instruction should promote self-understanding and self-directed learning and growth.

- Allow student needs and interests to dictate areas of independent study (see Appendix 45, page TSD.120). **Sample activity:** the student develops self-directed questions and activities on the topic of architecture. Findings are shared with the class and a local architect.

- Have the student pursue the study of attitudes, humaneness, self-understanding, personal and group dynamics. **Sample activity:** the student develops a profile of famous people with common traits and identifies those he or she aspires to possess. Describe why these traits are important. What can be done to develop them and what sacrifices must be made to attain them. How do these traits relate to curricular content; e.g., interdependence?

- Have the student undertake a study where the student has greater involvement in planning and time management (see Appendices 46 and 47, pages TSD.121–122). **Sample activity:** the student plans a procedure for a research project including the collection and organization of data, summarizing and presentation of findings and an evaluation of the process. Activities are recorded on a daily time log.

- Help the student understand self as a learner, developing insights into strengths, interests and learning preferences.
  Sample activity: the student analyzes a learning preferences inventory he or she has taken and applies the findings to a research project.

- The student explores his or her capacities and preferences for group and individual tasks.
  Sample activity: compare a learning log completed during an individual task with one completed during a group project. Formulate and reflect on the findings.

- Provide opportunities for the student to interact with others who share similar abilities and accomplishments
  Sample activity: students across grades who excel at and are keenly interested in mathematics become involved in creating a mathematics competition or conference for the school.

- Encourage a broad range of student products that challenge existing ideas and match the message to the audience (see Appendix 48, page TSD.123).
  Sample activity: the student depicts a self-selected concept in one of the following unusual forms: jingle, easy book, postcard, mathematics problem, bumper sticker, greeting card, or recipe and shares and evaluates the product.

- The student develops the skills necessary for critiquing his or her own performances and products and those of others.
  Sample activity: the student develops an evaluation form and criteria for a research project. Input is gathered from self, peers, teacher and another adult, and compared. A final personal summary evaluation statement is written.

- The student participates in roles of leadership and fellowship.
  Sample activity: a student in Grade 5 social studies organizes a classroom council election.

Many of theses strategies can be used with a wide range of learners, but students who are gifted and talented may be able to participate earlier and to a greater extent because of their abilities. For organizational options which can be used flexibly, see the chart provided in Appendix 49, page TSD.124.

For more information, see *Teaching Students Who are Gifted or Talented*, Book 7 in the *Programming for Students with Special Needs* series. Book 7 will be available from the Learning Resources Distributing Centre, Spring 1997.

Section V
Strategies in Context

Strategies, even the best of strategies, must be matched to student and teacher characteristics and curriculum expectations to have an impact on learning. A strategy that may calm one student with a behaviour disorder may send another student into a rage. A strategy utilized by a teacher with strong dramatic skills may be unsuccessful when utilized by a teacher whose strengths lie elsewhere. A strategy designed to encourage attitude change may or may not be useful in helping students acquire a new skill.

A strategy may provide for more than one learner characteristic. For instance, a strategy such as self-pacing may be used successfully with students who learn quickly and those who progress slowly.

A student may require variations in time, resources and instruction in one curriculum area but not in another; e.g., a strategy that works in language arts may or may not be applicable to social studies. By using multi-modal strategies, teachers can engage the visual, auditory and kinesthetic learners.

A number of suggestions for viewing strategies in context and for programming follow. The chart on page TSD.56 looks at programming implications based on selected student characteristics.

Programming Suggestions Keyed to Student Characteristics

Student Characteristics	Programming Implications
different developmental level	• identify student strengths and interests (see Appendices 50–52, pages TSD.126–129) • select appropriate curriculum expectations • create student-specific indicators of achievement
different rates of learning	• flexibly introduce specific curriculum expectations based on the pace at which the student is able to succeed • use flexible timing, frequency and duration of instruction, practice and application of learning
different economic, ethnic, linguistic or experiential background	• demonstrate respect for differences • use common school and community-based experiences and discussion supporting curriculum expectations • use multiple first-hand experiences • provide opportunities to share personal knowledge, skills and traditions • provide opportunities to identify the contributions of different peoples within the curriculum
different learning styles	• provide frequent opportunities for student choices about what will be learned next, and where, when, how and under what conditions learning will occur • use multiple modes of presenting, gathering, organizing and sharing information • use multiple ways of assessing, evaluating and communicating achievement and growth
different abilities in different curriculum areas	• make use of strengths and interests in different courses of study • check major discrepancies • use different expectations and programming in different areas as appropriate

Programming Suggestions Keyed to Student Characteristics (cont'd)

Student Characteristics	Programming Implications
different perceptions of self as learner	• provide curriculum support and support on a personal level for the student's unique cognitive, social, emotional, physical and ethical growth • adapt indicators of achievement to maximize the student's opportunity to demonstrate what has been learned • provide multiple opportunities for success and challenge • use various themes to provide a context for learning and vary the requirements • periodically review the curriculum expectations selected for the student • provide confirmation of student achievement and growth
different parental aspirations	• provide ongoing communication • use joint short-term planning to identify appropriate curriculum expectations and programming strategies • use case conferencing as necessary • use joint long-term planning within the curriculum with flexible alternatives clearly identified

- Cross-reference all aspects of programming: the nature of the student, evaluation, curriculum expectations, organizational and instructional strategies, assessment and communication with curriculum areas. It is one way of pulling together learner characteristics, goals in an individualized program plan and organizational, instructional and assessment strategies. Identifying strengths and weaknesses by curriculum areas may indicate that a student is in need of adaptations in only one or two areas rather than all. A cross-referencing chart is provided in Appendix 53, page TSD.130.

- Use Bloom's taxonomy as a tool for varying both assignments and assessments based on the student's ability to demonstrate knowledge, skills and attitudes. The teacher can build a lesson or series of lessons around a single theme, such as space, dinosaurs, travel, the Olympics, survival, extinction, relationships or patterns, but have assignments and assessments of varying levels of complexity. The assignments and assessments can focus on different levels of thinking skills: knowledge, comprehension, application, analysis, synthesis, evaluation or some combination of these.

- Use a modified idea from *Adapting Instructional Materials for Mainstreamed Students* by Jane Burnette.[8] It involves identifying the goal or goals to be achieved, enabling steps and a range of strategies. From this matrix the teacher can select enabling objectives and strategies for a specific student. An example is provided in Appendix 54, page TSD.131.

- Start with a curriculum outcome and related activities, basic proficiencies to be acquired or practised, and any adaptations required to help all students demonstrate the outcome. An example is provided in Appendix 55, page TSD.133.

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[8] From *Adapting instructional materials for mainstreamed students. Issue Brief 1* (ERIC/SEP Special Project on Interagency Information Dissemination) (p. 11), by J. Burnette, 1987, Reston, VA: Council for Exceptional Children. Adapted and reprinted with permission.

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Section VI
Appendices

Appendix 1

Teaching Follow-up[9]

Name: ______________________ School: ______________________

Lesson/Subject: ______________________ Date: ______________________

1. Successes Experienced	***2. Problems Encountered***
3. Possible Revisions	
4. Critical or Interesting Incidents	
5. I shared this lesson with . . .	

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[9] From *Cooperative learning: where heart meets mind* (p. 293), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Appendix 2

Teaching Follow-up[10]

Sample Questions

Name: ______________________ School: ______________________

Lesson/Subject: ______________________ Date: ______________________

1. Successes Experienced • What worked well? • What pleased you? • How did students evidence success?	***2. Problems Encountered*** • What frustrated you? • What was problematic? • Describe any disappointments.
3. Possible Revisions • What changes would you make if you were teaching this lesson again? • What revisions would deal specifically with the problems you encountered?	
4. Critical or Interesting Incidents • What was unexpected? • What intrigued you? • What questions were raised in your mind?	
5. I shared this lesson with . . . Collaborating with others promotes growth in implementing cooperative learning. • Who can you share your successes with? • Who can you problem solve with?	

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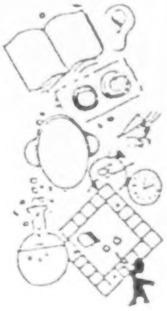
[10] From *Cooperative learning: where heart meets mind* (p. 294), by B. Bennett, C. Rolheiser-Bennett and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Learning Preferences[11]

There are different ways to learn. Indicate your preference by placing a number in the circles: 1 = Always, 2 = Sometimes, 3 = Seldom.

I PREFER LEARNING BY:

○ reading books and magazines
○ listening to a person talk or a tape recorder
○ watching people do things
○ watching films, TV or movies
○ putting things together and taking them apart
○ experimenting with things
○ playing a game
○ acting it out



I PREFER WORKING:

○ alone
○ with an adult
○ for a long period
○ in the morning

○ in the afternoon

○ with a friend
○ in a group
○ for a short period
○ in the evening

I PREFER SHARING BY:

○ telling about it
○ building something about it
○ acting it out

○ writing about it
○ drawing or painting about it
○ talking to other people about it

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[11] From *Academic challenge: a programming guide* (p. 3.35), by Edmonton Public School District No. 7, 1988. Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Appendix 4

Learning Channels Inventory[12]

Place the numbers 1, 2 or 3 in the box after each statement that best indicates your preference.

(3 = Often, 2 = Sometimes, 1 = Seldom)

1. I can remember something best if I say it aloud. ☐
2. I prefer to follow written instructions rather than oral ones. ☐
3. When studying, I like to chew gum, snack and/or play with something. ☐
4. I remember things best when I see them written out. ☐
5. I prefer to learn through simulations, games and/or role playing. ☐
6. I enjoy learning by having someone explain things to me. ☐
7. I learn best from pictures, diagrams and charts. ☐
8. I enjoy working with my hands. ☐
9. I enjoy reading and I read quickly. ☐
10. I prefer to listen to the news on the radio rather than read it in the newspaper. ☐
11. I enjoy being near others. (I enjoy hugs, handshakes and touches.) ☐
12. I listen to the radio, tapes and recordings. ☐
13. When asked to spell a word, I simply see the word in my mind's eye. ☐
14. When learning new material I find myself sketching, drawing and doodling. ☐
15. When I read silently I say every word to myself. ☐

In order to get an indication of your learning preference, please add the numbers in the boxes together for the following statements.

Visual Preference Score	2 ☐	4 ☐	7 ☐	9 ☐	13 ☐	= Total _____
Auditory Preference Score	1 ☐	6 ☐	10 ☐	12 ☐	15 ☐	= Total _____
K/T (Kinesthetic/Tactual) Score	3 ☐	5 ☐	8 ☐	11 ☐	14 ☐	= Total _____

The highest score indicates that my learning preference is ____________________

Now that I know which is my dominant learning style I can learn better by __________

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[12] From "Learning Channels Inventory," by Max Coderre. (Sherwood Park). *Teaching Today Magazine*. c/o Edmonton, AB. Second Impressions Magazine, 12644 – 126 Street. Reprinted with permission.

Appendix 5

Learning Styles: Teacher Observation Checklist[13]

Sound:
___ Does quality work during quiet work time
___ Does quality work during regular work time
___ Does quality work with music in background
___ Complains when there is too much sound
___ Has difficulty remaining quiet during quiet work time
___ Makes sounds or noises while working
___ Reminds others to be quiet while working

Classroom Design:
___ Has difficulty sitting properly
___ Enjoys lying down while listening to stories
___ Sits correctly during work periods
___ Stands by work area during work periods

Structure:
___ Likes to complete projects independently
___ Likes to complete projects step by step
___ Keeps work area neat
___ Tends to misplace supplies

Social Tendencies:
___ Likes to work or play with a group
___ Likes to work or play with a teacher nearby
___ Likes to work or play alone
___ Creates opportunities to visit with teachers

Responsibility and Persistence:
___ Completes projects quickly and neatly
___ Completes projects quickly but not neatly
___ Completes projects slowly and neatly
___ Completes projects slowly but not neatly
___ Does not always complete projects
___ Works best when given specific instructions
___ Cleans up work area on completing task
___ Needs reminding to clean up work area
___ Is easily distracted while working on a project
___ Remembers assignments

Mobility:
___ Leaves chair frequently during work periods
___ Often makes excuses to move around the classroom
___ Is extremely active during free play periods

Motivation:
___ Works best with much assurance from others
___ Needs teacher feedback while working
___ Works best when allowed to be creative
___ Initiates projects
___ Volunteers information about projects and discussion topics

Perception:
___ Enjoys books and filmstrips
___ Is attentive during story time
___ Likes to hear records or tapes during work time
___ Remembers what others say
___ Likes to visit classmates
___ Enjoys playing with toys with small pieces
___ Likes to draw or doodle
___ Likes to move around during work or play
___ Likes to create and react to play situations

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[13] From "Empowering students with style," by R. R. Neely and D. Alm, 1993, *Principal, 72*(4), p. 33. Reprinted with permission.

Appendix 6

Perceptual Preference Inventory[14]

Kinesthetic Learner	**Visual Learner**	**Auditory Learner**
• likes doing things with hands • points finger when reading • looks confined in the classroom • responds physically when listening to a story • often drops things, squiggles in the desk or takes frequent jaunts • likes to set up equipment • touches to get attention • stands closer to the person he is talking to than most people do • responds to physical touch • feels everything • rubs hands along wall while in lunch line or walking down hallway • puts hands on door frame, touches desks while moving down the aisle • is well coordinated — good at sports • frequently uses fists • likes to write on the blackboard • takes extensive notes during lectures	• chooses a book for its pictures or illustrations • likes orderly, attractive, neat surroundings • sees details — errors on board or typing, missing buttons, scruffy shoes • remembers where objects are located, what is seen • organizes by size, colour or other visual clues • would rather read than be read to • doodles or draws with great detail • likes to assist with displays, bulletin boards • pictures have good balance • finds phonics difficult unless a picture accompanies sound • has difficulty with verbal directions • watches speaker's face intently • rarely talks in class • responds in as few words as possible	• tends to chatter or make other noises • likes phonics — spoken language is easier than written • tells jokes, uses humour • good story teller • tends to talk to self aloud • knows all the words to songs, slogans, jingles • can easily memorize • poor handwriting, history of reversals • requires oral interpretation of charts, maps, diagrams • says material to self in order to learn it • likes to discuss what needs to be done • transmits messages accurately • likes rhythmic activities

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[14] From *Teaching through modality strengths: concepts and practices* (pp. 44–45), by W. B. Barbe and R. H. Swassing, 1979, Columbus, OH: Zaner-Blower Inc. Reprinted with permission.

Appendix 7

Primary Learning Modality: Observable Behaviours[15]

Kinesthetic Learner	**Visual Learner**	**Auditory Learner**
• learns by doing, direct involvement • does not enjoy reading or being read to • images do not occur unless movement is involved • does not attend to visual or auditory presentation • fidgets, tinkers, touches, feels, manipulates, puts things in mouth • is physical with emotion (can be a problem, touching, standing too close, bothers others) • reads laboriously • has poor language development • neither looks nor listens • often seems absorbed by some inner life or thought — oblivious to surroundings	• learns by seeing — watches to see what others do • likes demonstrations • recognizes words by sight — calls rabbit "bunny," laugh "funny" • often relies on initial consonants and configuration of words • likes descriptions • has lively imagination (daydreams, doodles), visualizes, thinks in colour, pictures show much detail • notices changes quickly • notices colour — movement (this can also be distracting) • remembers faces more often than names • takes notes • has good handwriting • tends to be deliberate, plans in advance, organizes, thinks through problems • when in new situation, tends to be quiet, observant • is neat, meticulous • prefers art to music • sees detail or components (may miss seeing work or work as a whole)	• loves noise, makes noise • enjoys talking, listening • when reading, vocalizes (moves lips, whispers, reads aloud to self) • tends to use phonics • remembers names more often than faces • is receptive, expressive, vocabularies are well developed for age (this can become a deficit if student does not listen during instruction) • is easily distracted by sound • talks problems out, tries out solutions verbally • expresses emotion verbally (laughs out, shouts out) • choice of clothing sometimes poor — no sense of what goes together • prefers music to art

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[15] From *Complete learning disabilities handbook* (p. 41), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Reprinted with permission.

Modalities: Some Applications[16]

One of the ways teachers can begin to accommodate learning differences is by planning lessons/units to accommodate the different ways students learn.

Think about a skill, concept or process you will teach during the coming week and complete the following:

1. a. Identify and record what the intended learning will be.

   ____

   b. Write out an objective for your intended learning.

   ____

2. a. Briefly explain how you will introduce your lesson.

   ____

   ____

   b. Go back and look at your introduction. Did you accommodate visual, auditory and kinesthetic learning modalities equally? If not, prepare what you might say or do to adjust your introduction.

   ____

   ____

   ____

3. Brainstorm for activities you will include in your lesson to accommodate a variety of learning modalities.

Visual Activities	**Auditory Activities**	**Kinesthetic Activities**

4. Generate alternative ways to evaluate for modality accommodation within your lesson.

Visual Evaluation	**Auditory Evaluation**	**Kinesthetic Evaluation**

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[16] From Edmonton Public School District No. 7. Reprinted with permission.

Prosocial Skills Lesson Plan for Elementary
Making Good Decisions[17]

Set

Begin the lesson by discussing with students the kinds of situations that require them to make decisions. It is important to relate the discussion to issues that students might be facing in their lives. Elementary students need to consider the decisions they make on a daily basis regarding the friends they choose and the types of behaviours they exhibit in certain situations. Situations you may want to make them consciously aware of are: who they choose as friends, what they do in their spare time, how they behave toward their parents and how they behave toward their teachers. The purpose of the discussion is to demonstrate how many decisions students make each and every day of their lives. The consequences of their decisions can impact on them positively or negatively based on their ability to make appropriate decisions. Once students have their attention focused on decision making and are beginning to see its value, then move on to the decision-making strategies.

Definition

Define the strategies for good decision making. Using the overhead projector, list the strategies and talk about each of them.

Strategies

- Ask yourself if your decision could hurt you either inside or outside.
- Ask yourself if your decision could hurt others either inside or outside.
- Ask yourself if your decision could damage anything.

The visual representation on the overhead projector is important to enable students to refer to the strategies on an ongoing basis. If students suggest alternative strategies, accept them and add them to the list.

Brainstorm

Brainstorm and record on a chart all the situations and places students need to make decisions. This list will provide a repertoire for future modelling and role-play scenarios. The list should be student generated so the scenarios are meaningful and relevant to their lives.

Modelling

Demonstrate for students how to go about making a decision regarding a situation at home or at school. An example might be deciding who to play with or what to play at recess time. Model an example of positive decision making (choosing to play an appropriate game at recess) using the above strategies. Using self-talk, demonstrate the decision-making strategies used. You want students to observe the use of self-talk so they can appreciate its purpose in monitoring behaviour.

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[17] From Edmonton Public School District No. 7. Reprinted with permission.

Demonstrate an example of negative decision making (choosing to play an inappropriate game at recess) using the strategies ineffectively. This demonstrates how an outcome of a situation can be very different based on whether a good or a bad decision is made.

Role Play

Ask students to form pairs. Have them decide on a situation they could role play to demonstrate the process of making an appropriate decision. Move around the room to monitor the development of these role plays. Coach and guide individual pairs to facilitate quality role plays. It is important to ensure students represent a situation as realistically as possible.

Performance Feedback

Give pairs the opportunity to share their role plays with other students in the class. Coach the students who are observing the role play to give specific feedback regarding the acting demonstrated in the role play and whether or not the strategies were used appropriately.

Transference

Once a few groups of students have had the opportunity to share their role play, tell students you will be asking them to make decisions through the rest of the period. This is where you must embed the skill into a new context related to the curriculum. For example, when students are required to complete an investigation with other students in the class during science, tell them to make decisions about who they will work with, who will get the materials and how much work each will do.

The purpose is to make students consciously aware of using the strategies and to give them the opportunity to practise the strategies as much as possible in a meaningful situation.

Prosocial Skills Lesson Plan for Junior High
Making Good Decisions

Set

Begin the lesson by discussing with students the kinds of situations that require them to make decisions. It is important to relate the discussion to issues that students might be facing in their lives. Junior high students need to consider the decisions they make on a daily basis regarding the friends they choose and the types of behaviours they exhibit in certain situations. Situations you may want to make them consciously aware of are: who they choose as friends, what they do in their spare time, should they smoke and should they choose to have sex. The purpose of the discussion is to demonstrate how many decisions students make each and every day of their lives. The consequences of their decisions can impact on them positively or negatively based on their ability to make appropriate decisions. Once students have their attention focused on decision making and are beginning to see its value, then move on to the decision-making strategies.

Definition

Define the strategies for good decision making. Using the overhead, list the strategies and talk about each of them.

Strategies

- Ask yourself if your decision could hurt you either physically or mentally.

- Ask yourself if your decision could hurt others either physically or mentally.

- Ask yourself if your decision could damage anything.

The visual representation on the overhead projector is important to enable students to refer to the strategies on an ongoing basis. If students suggest alternative strategies, accept them and add them to the list.

Brainstorm

Brainstorm the kinds of decisions students will need to make today. Facilitate discussion by having them think about contexts both in and out of school.

Modelling

Demonstrate how to go about making a decision regarding a situation at home or at work. An example might be deciding how much work to do today, whether to go out for lunch or whether to buy something. Model an example of positive decision making (choosing to do your work instead of going for lunch) using the above strategies. Using self-talk, demonstrate the decision-making strategies used. You want students to observe the use of self-talk so they can appreciate its purpose in monitoring behaviour.

Demonstrate an example of negative decision making (choosing to ignore the work and go for lunch) using the strategies ineffectively. This demonstrates how an outcome of a situation can be very different based on whether a good or a bad decision is made.

Role Play

Ask students to form pairs. Have them decide on a situation they could role play to demonstrate the process of making an appropriate decision. Move around the room to monitor the development of these role plays. Coach and guide individual pairs to facilitate quality role plays. It is important to ensure students represent a situation as realistically as possible.

Performance Feedback

Give pairs the opportunity to share their role plays with the other students in the class. Coach the students who are observing the role play to give specific feedback regarding the acting demonstrated in the role play and whether or not the strategies were used appropriately.

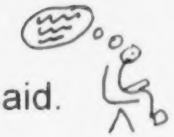
Transference

Once a few groups of students have had the opportunity to share their role plays, tell students you will be asking them to make decisions through the rest of the period. This is where you must embed the skill into a new context related to the curriculum. For example, when students are required to complete an investigation in science with other students in the class, tell them to make decisions about who they will work with, who will get the materials and how much work each will do. The purpose is to make students consciously aware of using the strategies and to give them the opportunity to practise the strategies as much as possible in a meaningful situation.

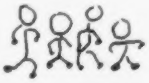
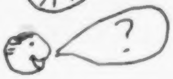
Appendix 10

Simplifications of Skill Steps for Young Students[18]

Listening

1. Look.
2. Stay still.
3. Nod your head.
4. Think about what is being said. 

Asking a Question

1. What will you ask?
2. Who will you ask? 
3. Is it a good time?
4. Ask the question. 

Responding to Teasing

1. Stop and think.

2. Count to five.
3. Walk away.

---

[18] From *Skillstreaming in early childhood: teaching prosocial skills to the preschool and kindergarten child* (p. 106), by E. McGinnis and A. P. Goldstein, 1990, Champaign, IL: Research Press. Reprinted with permission.

Social Skills Training: Other Teaching Resources

This listing is not to be construed as an explicit or implicit departmental approval for use of the resources listed. These titles are provided as a service only to assist school authorities to identify resources that contain potentially useful ideas. The responsibility to evaluate these resources prior to selection rests with the user, in accordance with any existing local policy.

Resources listed in this section can be ordered from the publishers.

The ASSIST series of manuals by P. Huggins. Longmont, CO: Sopris West
Telephone: (303) 651-2829

The ASSIST series of manuals deals with a range of prosocial skills. ASSIST stands for Affective/Social Skills: Instructional Strategies and Techniques.

Building self-esteem in the classroom includes a series of sequential lessons and activities designed to promote self-awareness. Students from K–3 learn to use the techniques of positive inner speech to build self-esteem and cope effectively with mistakes and put-downs.

Creating a caring classroom includes a collection of strategies designed to promote mutual respect, trust, risk-taking and support in K–8 classrooms.

Helping kids handle anger includes lessons to help students from K–8 acknowledge, accept and constructively express anger. Role play and puppets are used to encourage active and creative student involvement.

Teaching about sexual abuse provides students from K–8 with information about sexual abuse in a low-key, matter-of-fact way. Lessons focus on the student's right to reject inappropriate behaviour, assertiveness skills helpful in the prevention of sexual abuse and establishing family and community support systems.

Teaching cooperation skills is a series of lessons and experiential activities designed to teach students from K–8 the skills necessary for cooperative learning to take place. Students learn to resolve conflicts through negotiation and compromise.

Teaching friendship skills: primary version provides lessons for Grades 1–3 designed to teach the identified processes used by children who get along well with their peers: learning to listen to others, empathize and understand others' points of view and make themselves and others feel valued.

Teaching friendship skills: intermediate version provides lessons for Grades 4–8 designed to teach skills as in the *Primary Version*.

Esteem builders (1989) by Dr. Michele Borba. Rolling Hills Estates, CA: Jalmar Press / Kitchener, ON: Mind Resources
Telephone: (519) 895–0330.
ISBN 0–915190–53–2.

A K–8 program that uses five building blocks of self-esteem (security, selfhood, affiliation, mission, competence) as a base. Includes over 250 grade-level, curriculum-content cross-related activities, assessment tools and a checklist of educator behaviours for modelling. Contains instantly usable award designs for certificates, buttons and posters, a 40-week lesson planner and extensive bibliography.

Getting along with others: teaching social effectiveness to children (1993) by Nancy F. Jackson, Donald A. Jackson and Cathy Monroe. Waterloo, ON: Research Press
Telephone: 1–800–265–3375.
ISBN 0–87822–270–7.

A Grades 5–10 social effectiveness program. It includes 17 skills with prepared lesson plans for one to two hours of time. Each plan gives a session outline, including goals, materials needed and scripted dialogue. The first core components are: committing to positive interactions in general, careful definition and clarification of behaviour expectations, introduction to the new skill and consistent use of teaching strategies. The second and optional core components are: relaxation training, snack time and activities notes. Also included are: a homework guide, homework assignments, role plays and suggestions for students who misunderstand instructions. It is easy to use and requires minimal planning time.

Learning the skills of peacemaking: an activity guide for elementary age children on communicating, cooperating and resolving conflict (1987) by Naomi Drew. Rolling Hills Estates, CA: Jalmar Press / Kitchener, ON: Mind Resources
Telephone: (519) 895–0330.
ISBN 0–915190–46–X.

This activity guide includes 56 lessons for elementary age children. Objectives, materials list and procedures are set out. Includes scripts, examples of parent letters and illustrated ideas for projects, posters, murals, mobiles, poems and award certificates. The four main concepts are: accepting self and others, communicating effectively, resolving conflicts and understanding intercultural differences. The three main themes are: Peace Begins with Me, Integrating Peacemaking and Exploring Our Roots.

The Prepare curriculum: teaching prosocial competencies (1988) by Arnold P. Goldstein. Waterloo, ON: Research Press
Telephone: 1–800–265–3375.
ISBN 0–87822–295–2.

This manual provides a comprehensive prosocial skills training program for use with junior high and senior high school students. The curriculum consists of a series of 10 course-length interventions including problem solving, interpersonal skills, situational perception, anger control, moral reasoning, stress management, empathy, recruiting supportive models, cooperation and understanding and using groups.

Training methods involve games, simulations, role plays, group discussions and other activities that enhance group participation and motivation for learning. The book provides teaching guidelines and program rationales for the 10 interventions.

Room 14: a social language program (activities book, instructor's manual, and picture book) (1993) by Carolyn C. Wilson. East Moline, IL: Linguisystems, Inc.
Alberta representative: Virginia Wood
Telephone: (403) 282-2441.
ISBN 01-55999-255-7C5.

Room 14, for ages six to 10, includes an activities book, instructor's manual and a picture book. It is a curriculum resource which integrates easily into a language arts program with stories, comprehension questions and activities for making and keeping friends, fitting in at school, handling feelings, using self-control and being responsible. Lessons are well organized and well planned.

Skillstreaming in early childhood: teaching prosocial skills to the preschool and kindergarten child (1990) by Ellen McGinnis and Arnold P. Goldstein. Waterloo, ON: Research Press
Telephone: 1-800-265-3375.
Guidebook: ISBN 0-87822-320-7. *Program forms*: ISBN 0-87822-321-5.

The *Guidebook* identifies skills suitable for K-2 learners with multiple needs. It provides assessment, guiding strategy, concrete techniques for group or individual teaching of skills by a variety of professionals and involves the techniques of modelling, role playing, performance feedback and transfer training. It includes a chapter on evaluation and identification of skill deficits and strengths for a whole class and/or individual student plan. This book provides strategies for teaching 40 specific prosocial skills divided into six groups (Beginning Social Skills, School Related Skills, Friendship Making Skills, Dealing With Feelings, Alternatives to Aggression and Dealing With Stress).

The *Program Forms Booklet* includes teacher, parent and child skill checklists, plus a skill situations measure, response record, skills grouping, progress summary, teacher record, homework report forms, self-monitoring forms, group reward forms, skill tickets and notes, plus teacher, principal and parent awards.

Skillstreaming the elementary school child: a guide for teaching prosocial skills (1984) by Ellen McGinnis and Arnold P. Goldstein. Waterloo, ON: Research Press
Telephone: 1-800-265-3375.
Guidebook: ISBN 0-87822-235-9. *Program forms booklet*: ISBN 0-87822-236-7.

The *Guidebook* provides a detailed description of the components of structured learning and offers screening procedures to help identify students who are deficient in prosocial skills and their specific skill strengths and weaknesses. It presents a step-by-step guide for the implementation of structured learning with young children. The 60 skills fall under the headings of Classroom Survival, Friendship Making, Dealing With Feelings, Alternatives to Aggression and Dealing With Stress. A full listing of prosocial skills and their behavioural steps, along with lesson plans and suggested application situations are also included. Designed for Grades 1–6.

The *Program forms booklet* includes a collection of 28 program forms, teacher and student checklists, record forms, progress charts, report outlines, contract forms, awards for friendship, feelings, avoiding aggression and reducing stress.

Skillstreaming the adolescent: a structured learning approach to teaching prosocial skills (1980) by Arnold P. Goldstein, Robert P. Sprafkin and N. Jane Gershaw. Waterloo, ON: Research Press
Telephone: 1–800–265–3375.
ISBN 0–87822–205–7.

This book's major focus is social skill deficiency and its remediation through a skill training approach called structured learning. Structured learning is explicitly designed to teach adolescents social skills, planning skills, skills for dealing with feelings, skill alternatives to aggression and skills for responding effectively to stress. Screening and implementation procedures, prosocial skills and their behavioural steps along with lesson plans are included. Designed for Grades 7–12.

Social competence of young children with disabilities: issues and strategies for intervention (1992) by Samuel L. Odom, Scott R. McConnell and Mary A. McEvoy (eds.). Baltimore, MD: Paul H. Brookes
Telephone: 1–800–263–4374.
ISBN 1–55766–085–9.

This book examines current knowledge and provides intervention practices to promote peer-related social competence in young children with disabilities. This book addresses themes related to the nature of children's social competence, the influence of the child's environment and family interactions on the development of social competence and specific issues concerning children with speech-language, vision, and hearing impairments.

SSS: Social skill strategies (Books A and B) (1989) by Nancy Gajewski and Patty Mayo. Thinking Publications available from Brijan Resources Ltd., Edmonton, AB
Telephone: 1–800–567–1147 or (403) 430–8305.
Book A: ISBN 0–930599–51–9.
Book B: ISBN 0–930599–52–7.

Teach 63 social communication skills to students in Grades 5–12 with *SSS: Social Skill Strategies (Books A and B)*. Through structured activities, focused discussions, visualization task and home assignments, students learn appropriate skills to survive socially. Social communication skills help students perform better academically and vocationally too.

Dozens of activities may be duplicated from *SSS: Social Skill Strategies*. Special attention has been given to the inclusion of cooperative learning principles, role playing, self-talk, regulated learning and "whole brain" ideas. Exercises are readily adaptable as oral or written communication activities. Use *SSS: Social Skill Strategies* with students who have language disorders, learning disabilities, behavioural disturbances, cognitive disabilities and traumatic brain injuries.

Walker Social Skills Curriculum: the ACCEPTS (A Curriculum for Children's Effective Peer and Teacher Skills) program (1983) by H. M. Walker, et al. Toronto, ON: Psycan Corporation
Telephone: 1–800–263–3558.

Provides a complete curriculum for teaching classroom and peer-to-peer social skills to students with or without disabilities in Grades K–6. The program can be taught in one-to-one, small group or large group formats. It includes a nine-step instructional procedure, scripts that teach critical social skills and strategies for teaching behavioural management and classroom rules. An optional videotape is available which shows students demonstrating the classroom competencies and social skills that *ACCEPTS* teaches.

Walker Social Skills Curriculum: the ACCESS (Adolescent Curriculum for Communication and Effective Social Skills) program (1983) by H. M. Walker, S. McConnell, D. Holmes, B. Todis, J. Walker and N. Golden. Toronto, ON: Psycan Corporation
Telephone: 1–800–263–3558.
Manual and Student Study Guide.

The *ACCESS* program is a companion volume and upward extension of the *ACCEPTS* program. It provides a complete curriculum for teaching effective social skills to students at the junior high and high school levels. The program teaches peer-to-peer skills, skills for relating to adults and self-management skills. The program is designed to be taught one-to-one or in small or large group format. Thirty social skills scripts, an eight-step instructional procedure and student study guide are included.

Your choice: personal social skills course for young people (1990) by S. McConnon, et al. Scarborough, ON: Nelson Canada
Telephone: 1–800–268–2222.

Your Choice is a complete easy-to-use course of activities and strategies with accompanying reproducible master worksheets.

Each handbook represents a specific aspect of personal skills development and each chapter provides a structured lesson plan and suggestions for further work.

The complete course comprises:

A Guide to *Your Choice*: Making Active Learning Work	0–333–46425–7
The Nature of Friendship	0–333–46422–2
The Skills of Friendship	0–333–46423–0
Boyfriends, Girlfriends	0–333–46424–9
Interpersonal Communication	0–333–51118–2
Self-Esteem	0–333–46426–5
Self-Awareness	0–333–51116–6
Assertiveness	0–333–51117–4
Conflict	0–333–51119–0
Stress	0–17–420247–4
Making Decisions	0–17–420248–2
Feelings	0–17–420246–6
Groups	0–17–420249–0

The books are to be used by students in Grade 5 and up.

Cooperative Learning — Lesson Planning Guide[19]

DATE: ______________________

NAME: ______________________

ACADEMIC OBJECTIVE: ______________________

GRADE LEVEL: ______________________

SOCIAL OBJECTIVE: ______________________

SUBJECT: ______________________

I. ORGANIZATIONAL DECISIONS PRIOR TO TEACHING

GROUPS: SIZE:

ASSIGNMENT:
☐ Heterogeneous
☐ Homogeneous
Method: ______________________

ARRANGING THE ROOM:
☐ Desk Clusters
☐ Chair Clusters
☐ Floor Clusters
☐ Tables
☐ Other

MATERIALS:
☐ Shared
☐ Individual

LIST:

II. SETTING THE LESSON

POSITIVE INTERDEPENDENCE:
☐ Goal
☐ Incentive
☐ Resource
☐ Role
☐ Environment
☐ Sequence
☐ Identity
☐ Outside Force
☐ Simulation

ACADEMIC TASK DIRECTIONS:

CRITERIA FOR SUCCESS:

INDIVIDUAL ACCOUNTABILITY:

INTRODUCING SOCIAL BEHAVIOURS:

III. MONITORING AND INTERVENING

WHO WILL MONITOR GROUP WORK?
☐ Teacher
☐ Teacher/Students

HOW WILL MONITORING BE DONE?
☐ Informal notes
☐ Formal observation sheet

WHAT BEHAVIOURS WILL BE MONITORED?
____
____
____

IV. EVALUATING THE PRODUCT AND PROCESS OF GROUPWORK

ACADEMIC FEEDBACK:
(How will academic learning be evaluated?)

SOCIAL SKILL PROCESSING:
(How will students reflect on social interactions?)
Self-evaluation, by: ______________________
In Small Group, by: ______________________
Whole Class, by: ______________________

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[19] From *Cooperative learning: where heart meets mind* (p. 287), by B. Bennett, C. Rolheiser-Bennett and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Cooperative Learning — Lesson Planning Guide[20]
Sample Completed Form

DATE: ____________________

NAME: ____________________

ACADEMIC OBJECTIVE: What academic learning will be targeted?

GRADE LEVEL: ____________________

SOCIAL OBJECTIVE: What social interaction skills will be practised?

SUBJECT: ____________________

I. ORGANIZATIONAL DECISIONS PRIOR TO TEACHING

GROUPS: SIZE:
- start small
- consider nature of task, skills of students and time

ASSIGNMENT:
☐ Heterogeneous (mixed grouping)
☒ Homogeneous (similar grouping)
Method: How will you establish the groups, i.e., procedures?

ARRANGING THE ROOM:
☐ Desk Clusters
☐ Chair Clusters
☐ Floor Clusters
☐ Tables
☐ Other . . .

MATERIALS:
☐ Shared
☐ Individual

LIST: What materials are needed?

II. SETTING THE LESSON

POSITIVE INTERDEPENDENCE:	ACADEMIC TASK DIRECTIONS:	CRITERIA FOR SUCCESS:	INDIVIDUAL ACCOUNTABILITY:	INTRODUCING SOCIAL BEHAVIORS:
☐ Goal ☐ Incentive ☐ Resource ☐ Role ☐ Environment ☐ Sequence ☐ Identity ☐ Outside Force ☐ Simulation What types will be utilized?	• What procedures will students follow to complete the task? • How will the directions be explained? • Do students need a demonstration?	• How will accomplishments be measured (social and academic)? • How will students become aware of the criteria?	• How will individuals be held responsible for learning? • What will motivate students to be involved?	• How will social behaviours be taught and reinforced? • Plan to focus on one social behaviour.

III. MONITORING AND INTERVENING

WHO WILL MONITOR GROUP WORK?
☐ Teacher
☐ Teacher/Students

HOW WILL MONITORING BE DONE?
☐ Informal notes → e.g., global observation or anecdotal notes
☐ Formal observation sheet → e.g., tally sheets or checklists

WHAT BEHAVIORS WILL BE MONITORED?
In addition to the expected social skills that will be monitored, are there other behaviours you will observe?

IV. EVALUATING THE PRODUCT AND PROCESS OF GROUPWORK

ACADEMIC FEEDBACK:
(How will academic learning be evaluated?)

SOCIAL SKILL PROCESSING:
(How will students reflect on social interactions?)

See Chapter 9 on "Evaluation" for examples

Self-evaluation, by: ____________________
In Small Group, by: ____________________
Whole Class, by: ____________________

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[20] From *Cooperative learning: where heart meets mind* (p. 286), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Cooperative Learning Lesson Planning Guide[21]

Subject Area: ____________________

Grade Level: ____________________

Lesson Description: ____________________

Objectives: Academic: ____________________

Social: ____________________

Materials: ____________________

Organizational Decisions:

Group Size: ____________________

Assignment to Groups: ____________________

Room Arrangement: ____________________

---

[21] From *Cooperative learning: where heart meets mind* (pp. 289–290), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Task Directions: ______________________________

____

____

____

____

Positive Interdependence: ______________________________

____

____

____

____

Individual Accountability: ______________________________

____

____

____

____

Criteria for Success: ______________________________

____

____

____

Evaluation of Academic Learning: ______________________________

____

____

Social Learning (Processing):

✓

__ Self-evaluation, by: ______________________________

____

__ In Small Groups, by: ______________________________

____

__ Whole Class, by: ______________________________

____

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[21] From *Cooperative learning: where heart meets mind* (pp.289–290), by B. Bennett, C. Rolheiser-Bennett and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Checking Out My Social Skills[22]

A. Place a check (✓) in the boxes which you feel apply to you.

☐ I said things which made my partners feel good about themselves.

☐ I tried to smile even when I didn't agree with another person's ideas.

☐ I was a good person to have in the group because I made other people feel good.

☐ It felt great to make other people happy.

☐ I made an effort to disagree in an agreeable way.

☐ I made sure that my voice didn't get TOO LOUD!

☐ I politely told other people to stay on task.

☐ I was nice when I told others that it was getting too noisy.

☐ I helped tidy up.

B. Please answer these questions in the spaces below:

1. What were some of the things you said when you disagreed in an agreeable way?

2. What could your group work on next time to work together better?

---

[22] From *Cooperative learning: where heart meets mind* (p. 139), by B. Bennett, C. Rolheiser-Bennett and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

How Well Did We Work Together[23]

Team Name: ______________________________

Discuss, reach agreement and colour each bar on the graph up to the agreed level

	A. Used quiet voices	B. Offered ideas	C. Checked each other for understanding	D. Looked at partners as they contributed	E. Encouraged each other by asking for opinions	F. Encouraged each other by giving compliments
A whole bunch!						
A lot						
Some						
Little						
Very little						

---

[23] From *Cooperative learning: where heart meets mind* (p. 148), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Group Evaluation[24]

Place a check on the blank that best represents your group's evaluation of social skills.

	Seldom				Always
We made certain that all members of our group understood the work.	____	____	____	____	____
We listened to the ideas and contributions of all group members.	____	____	____	____	____
We were patient when explaining difficult material to members within the group.	____	____	____	____	____
We shared the workload within the group.	____	____	____	____	____

What was your group particularly effective in doing? Explain the secret of your success?

____

____

____

____

____

____

What would you do differently next time to enhance cooperation? Explain fully.

____

____

____

____

____

____

---

[24] From *Cooperative learning: where heart meets mind* (p. 150), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Team Assessment[25]

Complete the following questions as a team.

		Low				High
1.	Did all of the members of our group contribute ideas?	1	2	3	4	5
2.	Did all of the members of our group listen carefully to the ideas of other group members?	1	2	3	4	5
3.	Did all of the members of our group encourage other members to contribute their thoughts and opinions?	1	2	3	4	5

4. Three ways that we helped each other learn the material were:

- ____________________
- ____________________
- ____________________

5. a. One difficulty our group had was (explain fully):

____

____

____

b. To resolve the situation we could:

____

____

____

Group signatures: ____________ ____________

____________ ____________

---

[25] From *Cooperative learning: where heart meets mind* (p. 152), by B. Bennett, C. Rolheiser-Bennett, and L. Stevahn, 1991, Toronto, ON: Educational Connections. Reprinted with permission.

Co-teaching Planning Form[26]

Co-teachers ______________________________

Class/Subject(s) ______________ Date ______________

Teaching Session No. _______ Day(s) Mon.Tues.Wed.Thurs.Fri.Week(s) of _______

Next Planning Session Day ____________ Time __________

Location ______________ Date ____________

Goal(s)

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

Time	Location Person Responsible	Activity Format	Student Activity	Teacher Role	Accommodation Strategies	Evaluation Strategies

Comments ______________________________

____

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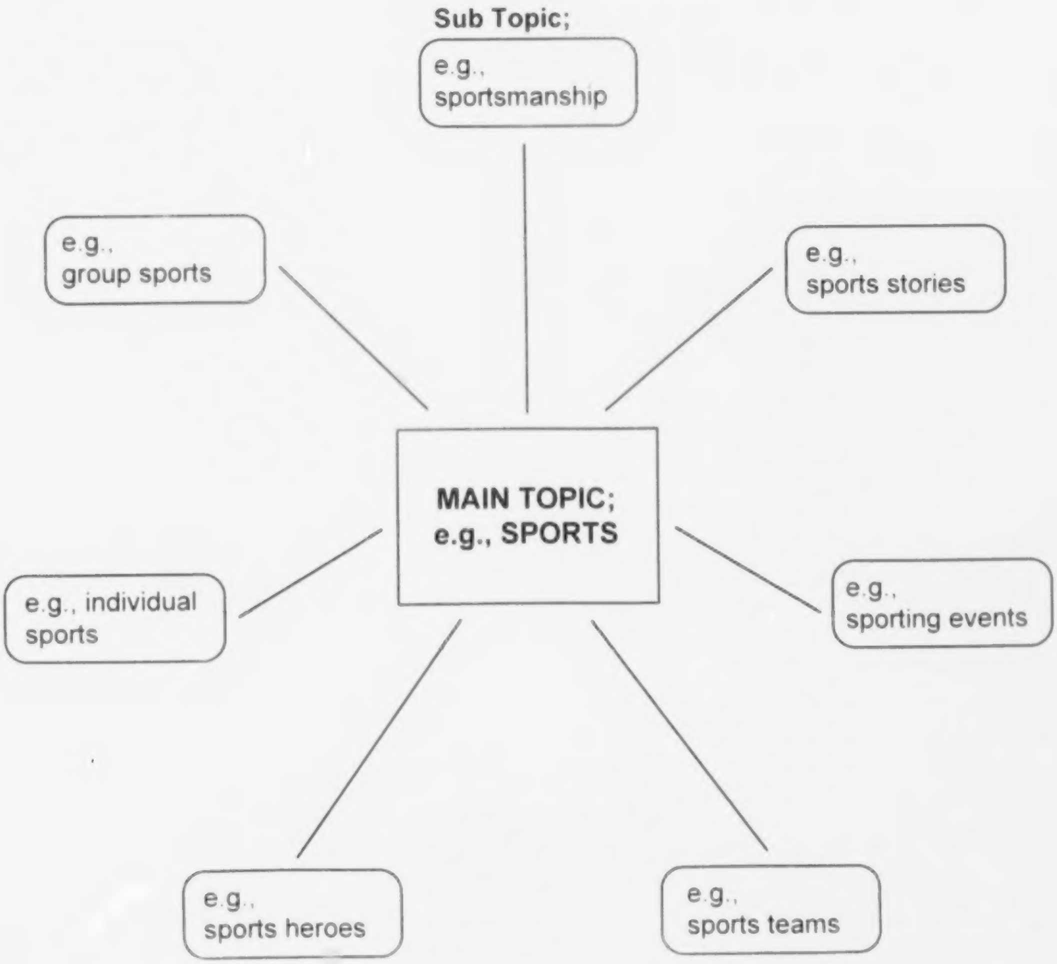
[26] From "Cooperative planning for regular classroom instruction of students with disabilities," by R. A. Gable, 1993, *Preventing School Failure, 37*(4), p. 19. Reprinted with permission of the Helen Dwight Reid Educational Foundation. Published by Heldref Publications, 1319 – 18th Street N.W., Washington, DC 20036–1802. Copyright © 1993.

Sample Web[27]

Provide students with a blank web or, initially, one with major headings supplied. Filling in key concepts, ideas and words can help students concentrate on the information being provided.


Sub Topic;
e.g., sportsmanship
e.g., group sports
e.g., sports stories
MAIN TOPIC; e.g., SPORTS
e.g., individual sports
e.g., sporting events
e.g., sports heroes
e.g., sports teams

---

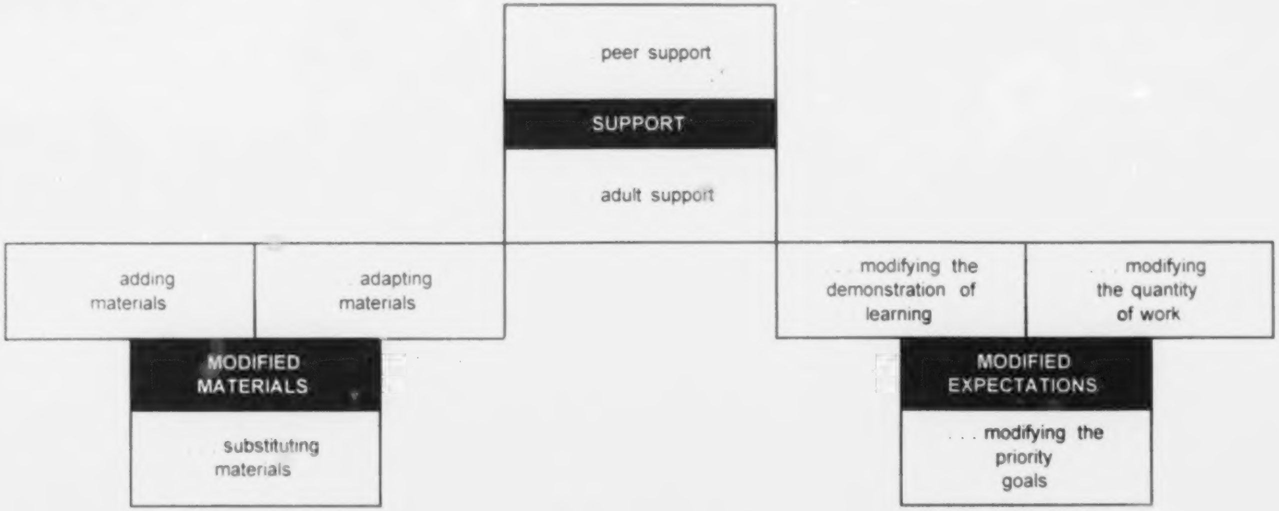
[27] From Edmonton Public School District No. 7. Reprinted with permission.

Curriculum Modification and Student Supports[28]

1. Can the student participate in this lesson in the same way as all other students?

   If ***YES*** — stop here. If ***NO*** — go on to question #2.

2. Which of the following supports and/or modifications (one or more) are necessary for the student's full participation in this lesson?


peer support
SUPPORT
adult support
adding materials
adapting materials
MODIFIED MATERIALS
substituting materials
. . . modifying the demonstration of learning
. . . modifying the quantity of work
MODIFIED EXPECTATIONS
. . . modifying the priority goals

- Does the student have all of the ***necessary supports***; e.g., technology, medical?
- Does the student have a way to ***communicate all day long***?
- Are all modifications and materials ***age-appropriate***?
- Are modifications made taking into consideration the concept of ***comparable challenge***?
- Does the student have opportunities to ***give as well as receive*** support?
- Are all modifications made keeping in mind the ***highest expectations***?
- Has the student been given all of the necessary instructional opportunities to gain ***core skills*** (reading, math and writing)?

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[28] From *From special to regular, from ordinary to extraordinary* (p. 27), 1993, Durham, NH: University of New Hampshire. Reprinted with permission.

Curriculum Modification Workplan[29]

The curriculum modification workplan can be used as both a pre-planning document and as an observation form to assess how planned modifications are working for the student and classroom.

Student Age Grade School

Likes

Dislikes

Strengths/Abilities

Goals/Expectations

Class/Subject Area

What is the class doing?	What is the student doing?	What goals are being met?	What supports are needed?
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5

Ways to Modify Typical Daily Routines

Goal

Daily routines

Goal

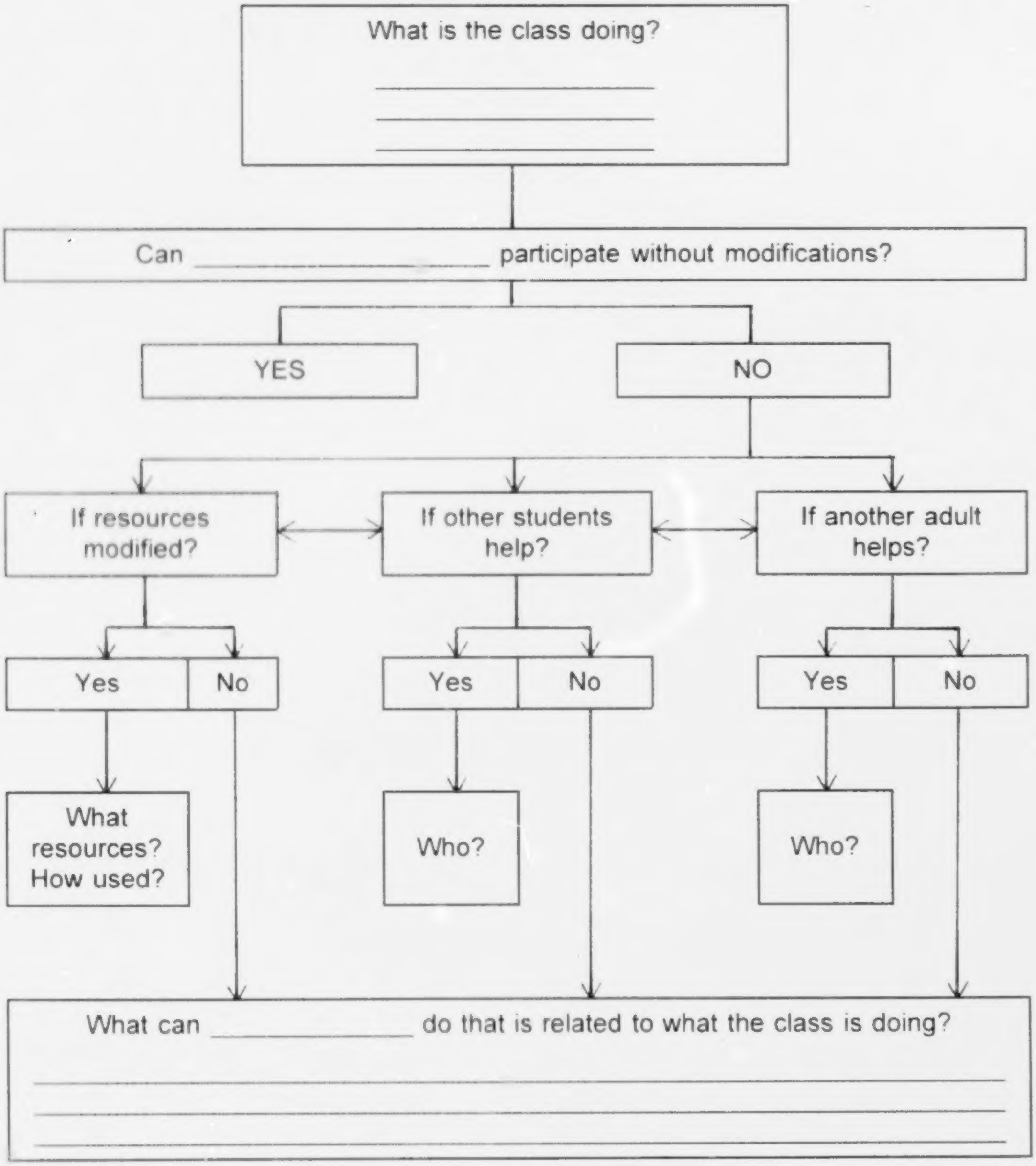
Daily Routines

---

[29] From *Strategies for modifying and expanding curriculum for students with disabilities*. 1990. Concord NH Institute on Disability. Reprinted with permission

Appendix 23

Modification Planning Form[30]


What is the class doing?
Can ______ participate without modifications?
YES
NO
If resources modified?
If other students help?
If another adult helps?
Yes
No
Yes
No
Yes
No
What resources? How used?
Who?
Who?
What can ______ do that is related to what the class is doing?

---

[30] From Edmonton Public School District No. 7. Reprinted with permission.

Modification Process Example[31]

LEARNING GROUP CHARACTERISTICS

CURRICULUM AREA:

GRADE LEVEL:

TOPIC:

ESTIMATED TIME:

Program of Studies

Knowledge:

Priority Goal:

Goals and Objectives:

Skill(s):

Attitude:

	Curriculum Implementation	Student Product	Demonstration of Growth
Basic plan for all students • What? • Why? • How?			
Students needing extended challenge			
Students needing more support			

Appendix 24

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[31] From Edmonton Public School District No. 7. Reprinted with permission.

Appendix 25

Modification Process Example[31]

Goal(s): Objective(s): Knowledge: Skills: Attitudes:	Student strengths, interests and needs to be considered:
Basic lesson:	Resources:
Students needing more support:	Organizing for instruction:
Students needing more challenge:	
Strategies selected: Why?	Criteria for evaluation: Basic: Support: Challenge:

---

[31] From Edmonton Public School District No. 7. Reprinted with permission.

Modification Process Example[31]

Sample Completed Form

Goal(s): Objective(s): **Knowledge**: Changes Albertans had to make to their lifestyle in order to cope with conditions during the depression. **Skills**: Gather, organize, interpret information. **Attitudes**: Appreciation and tolerance of the decisions made by Albertans during the depression.	Student strengths, interests and needs to be considered: – students who need some challenge – students who have difficulty reading – students with little background knowledge on the topic.
Basic lesson: Read with teacher *That Scatterbrain Booky*, focusing on lifestyle during the depression. Students find and record key words and phrases to describe home/food/clothing/jobs. – Students contrast each of these with their own lives in chart form.	Resources: *That Scatterbrain Booky* (book, audiotape) *Ten Lost Years* — Barry Broadfoot
Students needing more support: In addition to taking part in the reading of *That Scatterbrain Booky*, students can listen to it on tape to identify key words and phrases. – students describe any two of the topics: home/food/clothing	Organizing for instruction: – Students are given a choice to work individually, with a partner or in groups of three.
Students needing more challenge: Students also use as resource (selected sections) of the book *Ten Lost Years* by Barry Broadfoot. Students locate factual information. – Students support or question fictional accounts.	
Strategies selected: Why? – Record the story on tape for students who have difficulty reading. – Offer the option of using pictures for students who have difficulty writing.	Criteria for evaluation: **Basic**: students will develop a retrieval chart comparing home/food/clothing and jobs in Booky's time (1930s) to the student's lifestyle of today. **Support**: students will develop a chart and may use words of pictographs to depict information. **Challenge**: students will develop a chart to contrast the three situations.

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[31] From Edmonton Public School District No. 7. Reprinted with permission.

Program Analysis Worksheet (PAW)[32]

Name: ______________________ Date Initiated: ______________________

Curricular Area: ______________________ Review Date: ______________________

			IS IT APPROPRIATE?		MODIFICATIONS	
Class Learner Expectations highlight appropriate learner expectations	Assessment	As is	With adapted presentation/environment, expectations, materials, assistance, assessment	Person Resp.	Individual Objectives (IPP)	Assessment — Comments (date achieved)

---

[32] From *Homecoming model* (p. 67), by J. S. Thousand, et al., 1986, Burlington, VT: University of Vermont. Reprinted with permission.

Program Analysis Worksheet (PAW)[33]

Sample Completed Form

Name Katie

Date Initiated September 30

Curricular Area Grade 5 Social Studies – Topic A Canada Its Geography and People

Review Date October 30

			IS IT APPROPRIATE?		MODIFICATIONS	
Class Learner Expectations highlight appropriate learner expectations	Assessment	As is	With adapted presentation/environment, expectations, materials, assistance, assessment	Person Resp	Individual Objectives (IPP)	Assessment — Comments (date achieved)
The student will understand that Canada has distinct physical regions	draw a map of Canada with provinces/territories and capital cities	Y	will be given an outline map of Canada and be required to draw the provinces/territories and mark the locations of the capitals Will orally identify each province/territory and capital and the scribe will write the names	teacher	Katie will be able to orally participate in class assignments, assistance with writing will be provided when necessary	Achieved, she had no difficulty with the vocabulary and names, she was able to spell the names correctly
	exam – label provinces/territories and capital cities on a map of Canada	Y	will orally identify each province/territory and capital and the scribe will write the names			
The student will understand that Canada has distinct political divisions	written assignment – demonstrating an understanding of different groups having different viewpoints on, for example, the family	N	will present an audiotape or a videotape selection on how she views family and how another group of Canadians may view the family (compare and contrast – two points)	teacher		
The student will understand that Canadians modify and adapt to natural settings in ways that affect their lifestyle and environment	colour a map of Canada reflecting population density and compare this to climate	Y	none required			
	written exam – explain three ways a Canadians living in the north and b Canadians living on the East coast adapt to their environment	N	will take the written exam in an oral format with time extensions as necessary, a scribe will write the answers	teacher		

---

[33] From ECSS Educational and Counselling Support Services (1995) Reprinted with permission

Program Analysis Worksheet (PAW)[34]

Sample Completed Form

Name: Ivan

Date Initiated: September 15

Curricular Area: Grade 11 CALM 20 – Theme 3 – Relationships

Review Date: October 15

			IS IT APPROPRIATE?		MODIFICATIONS	
Class Learner Expectations highlight appropriate learner expectations	Assessment	As is	With adapted presentation/environment, expectations, materials, assistance, assessment	Person Resp.	Individual Objectives (IPP)	Assessment — Comments (date achieved)
Understanding relationships: personal and impersonal	oral report	Y	work with another student; use a reporter interview format; give three facts about family relationships	peer and teacher		
Recognizing commitments and expectations: levels of commitment, meeting personal needs, life cycle influences	written assignment: discuss three relationships from social, emotional, physical and emotional dimensions	N	will cut out two pictures, one showing how he feels about his mother; the other about his father	teacher		
Developing, maintaining, enhancing stable and satisfying relationships: relationships change, role of conflict and conflict resolution	demonstration through an interactive/ competitive game format	N	will identify orally or with pictures one thing he likes about peers in his circle of friends and one thing he does not like	teacher, circle of friends	Ivan will enhance his peer relationships by participating in lunch with his circle of friends	Achieved; he likes the company and dislikes being treated like a little kid
Dealing with grief and loss: identify the process and skills necessary	a collage depicting feelings related to a loss after one week, one month, six months, one year	Y	will find a picture of a person (or a pet) with whom he was close who either died or moved away; will be able to express appropriate feelings	teacher		
Choices and challenges: relationships and networks	participate in a team event where an individual cannot succeed alone	Y	will participate to the full degree he is able	teacher and peers	Ivan will participate with his circle of friends in various activities	Achieved; he participated in an obstacle course set up in the gym

TSD 96

Appendix 28

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[34] From ECSS Educational and Counselling Support Services (1995). Reprinted with permission.

Sample Sentence Starters and Organizational Outline[35]

A. Sentence Starters

1. I awoke with a start and ____________________
2. One of the best things about ____________________
3. I like __________ because ____________________
4. I disagree that ____________________

B. Essay Step One: Outline

Topic Sentence
Supporting Fact #1
Supporting Fact #2
Supporting Fact #3
Concluding Sentence

In my opinion ____________________

____________________ For one thing ____________________

____

__________ Another thing is, ____________________

____

__________ Also, ____________________

__________ In conclusion, ____________________

____

Variations of "In my opinion": I feel, I think, I believe, It is my belief

Variation of transition words: First of all, second, third

---

[35] From Edmonton Public School District No. 7. Reprinted with permission.

Organizing Ideas (General)[36]

Main topic (of chapter, book, short story, article, etc.):

____

____

____

Main ideas:

1. __________	2. __________	3. __________

Supporting examples, points, details:

a. __________	a. __________	a. __________
b. __________	b. __________	b. __________
c. __________	c. __________	c. __________
d. __________	d. __________	d. __________

---

[36] From Edmonton Public School District No. 7. Reprinted with permission.

Appendix 31

Organizing (Compare and/or Contrast)[37]

Main topic (of chapter, book, short story, article, etc.):

____

____

____

What is being compared and/or contrasted? (Note: one or several things or ideas can be compared/contrasted.)

a. ______________ to ______________

______________ ______________

b. ______________ to ______________

______________ ______________

Main points of comparison/contrast	Indicate whether they are the same, similar or different. If similar or different, explain how they differ.
i. ______________	______________________________ ______________________________
ii. ______________	______________________________ ______________________________
iii. ______________	______________________________ ______________________________
iv. ______________	______________________________ ______________________________

---

[37] From Edmonton Public School District No. 7. Reprinted with permission.

Organizing (Character Studies)[38]

Identify two or three main characters:

1. ______________________________
2. ______________________________
3. ______________________________

What were their goals or objectives?

1. __________	2. __________	3. __________
__________	__________	__________
__________	__________	__________

Identify major action(s) related to their goals/objectives?

1. __________	2. __________	3. __________
__________	__________	__________
__________	__________	__________

Did the characters:

a. cooperate? If so, how? ______________________________

____

b. compromise? If so, how? ______________________________

____

c. engage in conflict? If so, how? ______________________________

____

Did the characters achieve their goals?

Character	Yes	No	Why?
1.	__________	__________	__________ __________
2.	__________	__________	__________ __________
3.	__________	__________	__________ __________

---

[38] From Edmonton Public School District No. 7. Reprinted with permission.

TSD 101

Analysis of Errors[39]

Type of Error	Example of Error	Probable Causes	Suggested Corrective Procedure
1. Omissions and Insertions a. Omission and insertion of pronounced letters	- "pospone" for "postpone" - "familar" for "familiar"	Inaccurate visual image	- make students conscious of the need to see each letter in the word - have pupils look at the word carefully the first time - have pupils close their eyes and try to visualize it before they write it - break the word into syllables
		Inaccurate auditory memory	- pronounce each word accurately for the class at first presentation - pronounce each word with the class - listen while the class pronounces the word
		Careless or inaccurate pronunciation	- repeat the difficult part several times - activities to improve listening skills
b. Omission and insertion of silent letters	- "lineing" for "lining" - "ofen" for "often" - "gost" for "ghost" - "lite" for "light"	Inaccurate visual image	- see 1a. above - special emphasis must be placed on the visual image - observe each part of the word and have pupils practise writing the part likely to cause trouble - provide written exercises to reinforce correct spelling - teach spelling generalizations where applicable; e.g., dropping final e before adding a syllable beginning with a vowel (come — coming)
2. Letter Substitutions a. Substitution of consonant sounds	- "gudge" for "judge" - "sity" for "city" - "skool" for "school"	Inaccurate visual image	- see 1a. above - practise for correct image of the word
		Insufficient knowledge of sound-symbol relationships	- students need to know that some sounds can be represented by more than one written symbol; e.g., f can be represented by f, ff, gh (rough), ph (phone)

Appendix 33

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Analysis of Errors (cont'd)[39]

Type of Error	Example of Error	Probable Causes	Suggested Corrective Procedure
b Substitution of vowel sounds	– "salery" for "salary" – "rejoyce" for "rejoice"	Inaccurate visual image	– see 1a. above – break the word into syllables; look at each part carefully – try to get the kinesthetic "feel" of the word by practising
c Confusion of double vowels	– "feer" for "fear" – "quear" for "queer"	Inconsistency of English language Inaccurate visual image	– stress the fact that sometimes there is an inconsistency between word sounds and the letters that represent the sounds – concentrate on visual and kinesthetic memory for such words
3 Confusion from Mispronunciation	– "chimley or "chiminey" for "chimney" – "choclet" for "chocolate"	Careless or inaccurate pronunciation Careless listening habits Inaccurate auditory memory	– pronounce words carefully, especially when first presenting the word – activities to improve listening skills – accept only precise pronunciation from students – provide opportunities for oral use of words that give trouble – teachers and pupils must concentrate on auditory discrimination – see 1a.
4 Transportation	– "gril" for "girl" – "gose" for "goes" – "recieve" for "receive"	Inaccurate visual image Failure to listen carefully for sequence of sounds Failure to apply the generalization	– see 1a. – pronounce words distinctly while pupils listen to sequence of sounds – give students practice pronouncing while they write troublesome words – rule concerning "ie" and "ei" is one of the few useful generalizations; be sure students learn entire rule

---

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Analysis of Errors (cont'd)[39]

Type of Error	Example of Error	Probable Causes	Suggested Corrective Procedure
5 Doubling (except derived word endings)	– "reccomend" for "recommend" – "vaccum" for "vacuum"	Inaccurate visual image Carelessness Lack of concentration during the process of learning the word	– stress the double consonant in presenting or representing the word – proofread for careless errors; use the dictionary – repeat steps in learning the word – use word correctly in a sentence
6 Derived Word Endings	– "stopt" or "stoped" for "stopped" – "comeing" for "coming" – "flys" for "flies" – "sincerly" for "sincerely"	Failure to apply the generalizations re: doubling consonants, forming plurals, adding suffixes to words ending with e, etc. (See spelling generalizations) Carelessness	– teach the use of the rules related to forming derivatives – provide plenty of practice, using simple words – pupils list other words that illustrate the use of the rules (see spelling generalizations) – proofread for careless errors
7 Homonyms	– "there" for "their" – "to" for "too" – "its" for "it's"	Failure to associate word with correct meaning	– illustrate use of word with its meaning – present the words in context – use pairs of words in sentences to distinguish meanings – emphasize meaning during initial presentation
8 Phonetic Spelling	– "bin" for "been" – "agen" for "again"	Applying phonetic spelling to non-phonetic words	– student must rely on visual memory for many words – see 1a.
9 Unclassified a No sound-symbol relationship	– "inrean" for "imagine" – "bect" for "truck"	Deficient in phonetic sense or training	– begin with simple visual-auditory training – use kinesthetic approach also

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Analysis of Errors (cont'd)[39]

Type of Error	Example of Error	Probable Causes	Suggested Corrective Procedure
b. Misapplication of rules	– "nieghbor" for "neighbor"	Overemphasis on rules, or not learning entire rule. Rule: i before e except after c or when sounding like a as in neighbor and sleigh (exceptions: seize, weird)	– rules are not generally helpful in learning to spell in lower grades and are of limited value in upper grades
c. Illegible handwriting	– "turm" for "turn" – "wen" for "win" – "crim" for "aim"	Incorrect letter forms	– provide practice on troublesome letter forms – emphasize accurate letter formation
d. Carelessness		Poor concentration Poor work habits	– proofreading – praise all improvement

---

[39] From Edmonton Public School District No. 7. Reprinted with permission.

Appendix 34

One Hundred Words Most Frequently Written By Elementary School Children in Grades 1–6[40]

the
and
I
a
to
was
in
it
he
we
my
of
is
on
you
they
that
went
when
then
for
she
there
one
so
had
said
like
but
have
got
were
are
at
me
go
up
all
with
day
his
out
would
get
him
her
came
some
because
going
very
if
not
be
little
could
home
this
down
can
back
as
about
them
saw
house
two
mother
from
our
what
do
time
just
after
see
will
an
now
dog
people
over
by
man
big
into
come
has
did
play
once
too
their
off
or
your
know
dad
around
us

(These 100 words and their repetitions account for 58% of the total word counts).

---

[40] From *Teaching thinking* (pp 35–38), by V Thomas, 1979, Toronto, ON Gage Publishing Reprinted with permission

Appendix 35

Spelling for Writing List[41]

Grade 1 Word List

- a
- all
- am*
- and*
- at
- ball
- be
- bed
- bed
- book
- box
- boy*
- but
- came*
- can*
- car
- cat
- come*
- dad
- day*
- did
- do
- dog*
- for*
- fun*
- get*
- go
- good*
- got*
- had*
- he*
- her*
- him*
- his*
- home*
- I*
- if
- in*
- into*
- is
- it*
- its*
- let
- like*
- look
- man
- may
- me*
- my*
- no*
- not
- of
- oh
- old
- on*
- one*
- out*
- play*
- ran
- red
- ride
- run
- see
- she
- so
- stop
- the*
- this
- to*
- two*
- up
- us
- was*
- we*
- will*
- yes
- you*

Grade 2 Word List

- about*
- after
- an*
- any
- are*
- as
- ask
- away
- baby*
- back
- bad
- been*
- before*
- being
- best
- black
- boat
- both
- brother*
- buy*
- by
- call
- candy
- city
- coming*
- could
- doing
- door
- down*
- each
- eat
- end
- fast
- father*
- feet
- fell*
- find
- fire
- first*
- fish
- five
- food
- four
- from*
- funny
- game
- gave
- girl
- give
- going*
- happy
- hard
- has*
- have*
- help
- here*
- hit
- hope*
- horse
- house*
- how*
- just*
- keep
- kid
- know*
- land
- last
- left
- little*
- live
- long
- looking
- lot
- love
- mad
- made*
- make*
- many*
- men
- more
- most
- mother*
- much
- must
- myself*
- name*
- new*
- next
- nice*
- night
- now*
- off*
- only
- open
- or*
- other
- our*
- outside*
- over
- park
- playing
- put
- read
- room
- said*
- same
- saw*
- say
- school*
- sea
- ship
- show*
- sleep
- small
- snow
- some*
- soon*
- start
- stay
- still
- store*
- story
- take
- talk
- tell
- than*
- that
- them*
- then*
- there*
- they*
- thing
- think*
- three
- time*
- today*
- told
- too*
- took
- tree
- try
- used
- very*
- walk
- want*
- way
- week
- well*
- went*
- were*
- what
- when*
- while*
- white*
- who
- why
- wish
- with*
- work
- your

*Spelling demons or commonly misspelled words.

---

[41] From "The Spelling for writing list," by S. Graham, K. P. Harris and C. Loynachen, 1994, *Journal of Learning Disabilities, 27*(4), pp. 210–214. Copyright 1994 by Pro-ed, Inc. Reprinted with permission.

Spelling for Writing List (cont'd)[41]

Grade 3 Word List

again*
air
almost
also
always*
another*
anything*
around*
because*
better
can't*
catch
children*
class
didn't*
dinner
does
don't*
earth
even
ever
every*
everyone*
everything*
eye
face
family*
few
found*
friend*
front
getting*
great
hair
half
having*
head
heard*
hour
hurt*
I'll*
I'm*
it's*
kind
knew*
lady
later
let's*
life
lunch
maybe*
might*
money*
morning*
Mr.*
Mrs.*
Ms.
never
nothing
once*
own
party*
people*
person
place
ready
real
right*
running*
says
should
sister
someone*
something*
sometime*
stopped*
summer*
talking
teacher*
team
that's*
their*
these*
thought*
trip
trying
turn
walking
wasn't
watch
water
where*
which
won
world*
would*
year
you're

---

*Spelling demons or commonly misspelled words.

---

[41] From "The Spelling for writing list," by S. Graham, K. P. Harris and C. Loynachen, 1994, *Journal of Learning Disabilities*, 27(4), pp. 210–214. Copyright 1994 by Pro-ed, Inc. Reprinted with permission.

Words Most Frequently Misspelled[42]

25 Words Most Frequently Misspelled in Each of the Elementary Grades

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
too	too	too	their	too	their
because	because	because	through	that's	too
was	upon	friend	because	until	that's
when	they	that's	friend	there	friend
went	wheels	through	too	lot	it's
they	about	there	an	you're	lot
little	again	upon	off	silver	there
nice	didn't	went	that's	beautiful	our
wants	holiday	where	they	it's	beautiful
would	said	finally	there	friend	grabbed
to	scared	wait	heard	chief	heard
said	that's	am	know	again	outside
like	to	first	finally	holiday	then
I	ghost	it's	again	horror	they
after	good-bye	another	course	off	you're
friend	morning	clothes	then	quite	finally
straw	our	know	went	received	pollution
there	people	said	caught	they	started
eat	dead	their	told	stubborn	people
then	many	were	think	started	supper
goes	nobody	baseball	were	scream	through
teacher	summer	beautiful	everyone	listened	where
have	their	favorite	favorite	experience	morning
sometime	there	ghost	first	cute	were
of	would	hockey	had	beauty	when

---

[42] From *Teaching spelling: Canadian word lists and instructional techniques* (pp. 35–38), by V. Thomas, 1974, Toronto, ON: Gage Publishing. Reprinted with permission.

Additional Words Most Frequently Misspelled in Elementary School[42]

afraid
all
always
and
animals
are
around
at
away
awhile
back
bear
been
before
began
behind
believe
better
bird
birthday
built
buys
bye
came
can't
catch
chases
children
climbed
come
coming
could
couldn't
cousins
decided
different
doctor
does
doesn't
don't
ever
every
everyday
everything
exciting
family
fell
field
few
finished
fired
flowers
for
found
frogs
funny
getting
girls
goalie
going
happened
happily
haunted
having
here
him
his
hole
home
horses
hospital
house
in
Indians
inside
into
its
just
knew
let's
bought
break
broke
brother
brought
months
mountains
my
names
neighbor
next
no
nothing
now
o'clock
once
one
others
out
parents
picked
pictures
place
practising
pretty
down
downstairs
engines
equipment
especially
probably
quiet
really
recess
right
saw
school
screamed
second
shoot
shot
slept
so
some
something
spotted
stepped
stopped
strange
surprise
got
grade
grandma
green
ground
swimming
take
than
the
them
there's
they're
things
thought
threw
throw
trailer
tried
turned
two
very
wasn't
water
we're
weren't
lived
looked
met
middle
might
what
white
who
whose
will
with
without
wolf
work
wouldn't
years

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[42] From *Teaching spelling: Canadian word lists and instructional techniques* (pp. 35–38), by V. Thomas, 1974, Toronto, ON: Gage Publishing. Reprinted with permission.

Spelling Rules Worth Teaching[43]

The following generalizations are sufficiently universal to be taught to students who are ready to learn them.

1. Words ending in silent *e*: drop the *e* when adding a suffix or ending beginning with a vowel; e.g., skate, skating, skater.
   Exceptions for senior pupils — advantageous, manageable, changeable.
2. When a root word ends in *y* preceded by a consonant, the *y* is changed to *i*, unless the ending begins with an *i*; e.g., baby, babies; fly, flies, flying.
3. When a root word ends in *y* preceded by a vowel, the root word is not changed when adding a suffix; e.g., chimney, chimneys; play, plays, played, playful.
   Exception — pay, paid.
4. When a one-syllable word ends in a consonant preceded by one vowel, the consonant is doubled before adding a suffix or ending that begins with a vowel; e.g., hop, hopping; ship, shipping.
   If the suffix or ending begins with a consonant, there is no doubling; e.g., shipment.
5. In words of more than one syllable, the final consonant is doubled before adding a suffix or ending, if:
   - the last syllable is accented
   - the last syllable ends in a consonant with one vowel before it
   - the suffix or ending begins with a vowel; e.g., begin, beginning, beginner; admit, admitting, admittance.
6. The letter *q* is always followed by *u* in common English words; e.g., queen, quiet.
7. No English words end in v; e.g., love, glove.
8. Proper nouns and most adjectives formed from proper nouns should begin with capital letters; e.g., Canada, Canadian.
9. Most abbreviations end with a period; e.g., etc., Nov.
10. The apostrophe is used to show the omission of letters in contractions; e.g., don't, haven't.
    Exception: won't.
11. The apostrophe is used to indicate the possessive form of nouns but not pronouns; e.g., boy's, its, dog's, theirs.
12. When adding *s* to words to form plurals or to change the tense of verbs, *es* must be added to words ending with the hissing sounds (*s, x, sh, ch*); e.g., glass, glasses; watch, watches.
13. When *s* is added to words ending in a single *f*, the *f* is changed to *v* and *es* is added; e.g., half, halves; shelf, shelves.
    Exception: roof, roofs or rooves.
14. Usually *i* comes before *e* except after *c*, or when sounded like *a*; e.g., friend, receive, sleigh.
    Exceptions: seize, weird, ancient, neither.

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[43] From *Spelling handbook: grades 1–6* (pp. 4–5), by Edmonton Public School District No. 7, 1985, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Reading Program Used Successfully with Students with Learning Disabilities[44]

Joan Harwell in the *Complete Learning Disabilities Handbook* describes a reading program that has worked well for her. The program involves the sequential teaching of:

- consonant and short vowel sounds
- blending (reading word attack; blend two or three letters to make a word) and unblending* (spelling)
- sight words
- special combinations as they occur — sh, th, oo, ou, ow, ing, all, etc.
- rules for short or long vowels and other rules for structural analysis
- new vocabulary
- related reading skills.

* Joan Harwell provides the following list of words that can be used to teach the beginning spelling skill of unblending. For example, have the student say a word such as *cat* and exaggerate each sound, listen for each sound — *C-A-T*. Have the student write the word on the blackboard or on paper as he or she unblends (exaggerates) each sound.

at	cat	bus	rob	slam	fast
up	cup	drum	ran	grab	just
am	cut	cram	long	wag	snug
us	bag	last	must	hot	put
on	rag	lamp	jump	hop	pad
in	rug	nut	trap	drop	snap
if	rush	but	dot	fun	top

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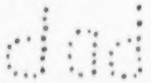
[44] From *Complete learning disabilities handbook* (p. 141), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Reprinted with permission.

Appendix 39

Techniques to Assist Students to Spell[45]

The following is a modification of a list of techniques suggested by Joan Harwell in the *Complete Learning Disabilities Handbook*.

1. scramble and unscramble; for example, ylpa (play)
2. missing letter; have students fill in a missing letter; for example,
   p _ a y
3. colour-coding; for example, using red for vowels
4. clay-spelling; for example, forming letters with coloured plasticine
5. dot-to-dot; for example, writing word dot to dot



6. writing with resistance; for example, scratching word into plasticine
7. manipulative letters; for example, using felt squares with letters on them or using rubber letters
8. word searches and puzzles; for example, developing your own beginning with words students should know
9. proofreading; for example, proofreading with a buddy or with a parent
10. syllabication and structural analysis; for example, before becomes be for + e
11. teacher-guided practice using rhythm and pitch; for example, spell it aloud; close eyes and spell it
12. master list crutch; for example, produce master word list of high-frequency words and laminate for the student to use when in doubt about spelling
13. memory tricks and patterns; for example, for "jeep" exaggerate the ee sound by shaking head
14. "rap it" — march to the beat while saying it out loud
15. brainwash rules such as *i* before *e* except after *c*
16. card reader drill:
    - see the word
    - hear letters in order
    - record letters in order
    - turn card over and write word
    - turn card back over and check spelling of word.

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[45] From *Complete learning disabilities handbook* (pp. 143–146), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster. Reprinted with permission.

Principles and Rules[46]

Respect one another:

- Physical (Keep hands and feet to yourself)
- Feelings
- Property.

Accept responsibility:

- Willing to learn
- Prepared to learn
- Do the work.

Rules:

- describe the behaviour not the attitude
- need to be reinforced by the teacher
- need to be enforced every time they are broken
- take energy and time to enforce.

A good rule:

- is brief
- is stated positively when possible
- makes sense to those who make, enforce and follow it
- is clear, specific and behavioural.

Examples of rules that could apply at all grade levels:

- bring all materials to class (if need be stipulate pencil, paper, text, etc.)
- be in your seat and ready to work when the bell rings
- be polite to all students and staff
- stay in your seat and listen when someone is talking
- respect school and people's property.

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[46] From Edmonton Public School District No. 7. Reprinted with permission.

Common Pitfalls in Administering Logical Consequences[47]

- Giving in to pity and feeling sorry for the student. This may teach students to feel sorry for themselves or that you don't really mean what you say.
- Allowing second or third chances. This encourages irresponsibility.
- Taking a punitive attitude, demonstrating impatience, using shame or humiliation, "rubbing it in" (through words, voice tone or body language). This can breed revenge on the part of the student and teach the use of negative power to control others. Anything that increases the student's anger against the teacher, decreases his willingness to assess the consequences as logical within the group structure and his willingness to cooperate with the total situation.
- Choosing a consequence that is inconvenient or punishing to you and does not encourage you to follow through.
- Too much talking — this is probably the most common error observed in teacher practice. Excessive talking can divert from the issue, reinforce the student goal and teach "teacher deafness."
- Being inconsistent. Inconsistent negative consequence may actually serve to reinforce the behaviour.
- Giving into teacher guilt. This may indicate to the student that it pays to feel abused if they can make the teacher feel guilty.
- Fearing the consequence is too easy. It isn't necessary for a consequence to be difficult or unpleasant. Most of them are somewhat unpleasant and uncomfortable, but suffering is not an essential or necessary part of the learning situation.
- Reacting to more than one behaviour at a time — particularly in reacting to the way the student takes the consequence; he or she is either not demonstrating enough misery or is trying to get out of it. The positive possibilities of the consequence may be cancelled out by an unwitting reinforcement of the student's mistaken goal.
- Giving way to expediency — at the moment, it is sometimes easier on the teacher to punish or overlook than to take the time and thought to initiate logical consequences and carry them through adequately and peacefully.
- Tone of voice — displaying anger, yelling or demanding action, turns the situation from a logical consequence into punishment or retaliation. A firm but friendly tone is most effective.
- In a dangerous situation, consequences should not be used — action is necessary.

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[47] From Edmonton Public School District No. 7. Reprinted with permission.

Natural and Material Reinforcements[48]

Statements of Praise and Encouragement

- Very accurate answers and so attractively done!
- You are really improving in (specific area). I'm proud of you.
- You are listening with such concentration. That's very polite (specific name). Thank you.
- I'm so pleased for you that you've . . .
- You're on the right track now. Let me know if I can be of assistance.
- Right on.
- That turned out just perfectly.
- That's a very good way of looking at it.
- That's an interesting point of view.

Natural/Social/Activity Reinforcements

- be first in line
- record own behaviour on a graph
- care for class pets or water class plants
- pass out paper or run errands
- decorate the bulletin board
- serve as class or office messenger
- sit by a friend
- operate the slide, filmstrip or movie projector
- visit the school principal or librarian
- give a message on the intercom
- attend class field trips
- play chess, checkers or other games
- attend school assemblies or dances
- eat lunch in cafeteria instead of classroom
- be team captain
- write and direct a play
- help correct papers
- have free time to use specific equipment or supplies
- have use of class walkman or tape recorder.

Material Reinforcements

- badges, balloons, stickers
- chalk, crayons, erasers
- bookmarks, colouring books, books
- cosmetics, jewelry, self-stick skin tattoos
- marbles, jump rope, hackey sack
- cookies, muffins, popcorn
- positive note or phone call home.

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[48] From Edmonton Public School District No. 7. Reprinted with permission.

Appendix 43

Social and Communication Skills Checklist[49]

		DATE INITIALS				
1.	Interacts with peers	a. responds to others				
		b. initiates				
2.	Interacts with adults (teacher)	a. responds to others				
		b. initiates				
3.	Uses social greetings					
4.	Uses farewells					
5.	Uses expressions of politeness					
6.	Participates in joking or teasing					
7.	Makes choices & indicates preferences					
8.	Requests help, e.g., for clarification					
9.	Asks questions, e.g., for information, clarification					
10.	States or indicates:	a. don't know/understand				
		b. when finished with an activity				
11.	Follows directions	a. for curricular tasks				
		b. for helping tasks/errands				
12.	Follows directions	a. given to the student individually				
		b. given to the students as a group				
13.	Orients toward speaker					
14.	Secures listener's attention before communicating					
15.	Takes turns communicating in a conversation with others					
16.	Gives feedback	a. positive				
		b. negative				
17.	Uses appropriate gestures and body movements when interacting					
18.	Uses appropriate language for topic of conversation					
19.	Is understood by listeners					

SUGGESTIONS or COMMENTS

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[49] From *Strategies for full inclusion*, by J. York, T. Vandercook, and S. Wolff (eds.), 1990, Minneapolis, MN: Institute on Community Integration, University of Minnesota. Reprinted with permission.

Behaviour Interviews

When a student's behaviour requires intervention, arrange a "wait time" in a quiet neutral environment before conducting a behaviour interview with the student. This wait time provides an opportunity for the student to calm down and regain self-control and lessens the likelihood that the student will view the teacher's attention as a reward for the unwanted behaviour. The wait time should be solitary and uninterrupted.

Begin the interview when the student is completely calm. Take notes during the interview and date them. Use a non-threatening tone, without judgement or blame. If there are two students involved in the incident, both should be involved. Remind them to take turns talking and to listen to each other.

- Ask: what did you do that caused you to be here?
  The purpose of this question is to have the students own their own behaviours and to identify those behaviours. Have them be specific; for example, if they used profanity, have them repeat the words.

- Ask: what happens when you behave this way? Do you think you made some unwise choices? Why were the choices unwise?
  The students are asked to make judgements regarding the value of the behaviours. It is appropriate to point out problems and consequences arising from the behaviours that the students may have overlooked.

- Ask: what are some better choices you might make next time?
  The students are required to formulate a plan for making better choices. You may provide help with the plan but the plan should belong to the student. Go over the options with the students using various scenarios. Make sure students are aware of several responses in each situation that would result in positive outcomes. Role playing and rehearsing these ideas will increase the likelihood of students using them.

- Students should formulate their plan with a timeline. If two students are involved, they may be left to create a plan of their own and share it when they are ready. Ask when the plan will begin. Students must own the start time to increase their investment in its success. (It should start when they walk out the door.)

- Remind students that there is a timeline and that there will be follow-up. If the plan does not work, develop another. If the plan is successful, commend the students. Students must know that it is OK to admit something isn't working and to try again.

Goals of Intervention[50]

TO HELP THE STUDENT:

Clarify and understand the problem.

Take responsibility for the problem.

Generate a menu of alternative behavioural responses.

By providing him or her with opportunities to behave appropriately and by acknowledging the appropriate behaviour.

Learn skills which enable him or her to realistically monitor his or her own behaviour.

Be accountable for all his or her behaviour including successes.

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[50] From Edmonton Public School District No. 7. Reprinted with permission.

Student Plan of Action[51]

NAME ______________________ DATE ______________________

What did I do that got me sent out of class/school:

The problem I can deal with right now is:

What I will do immediately to improve:

Interim review dates:

Teacher's Signature

Student's Signature

Principal's Signature

Parent's Signature

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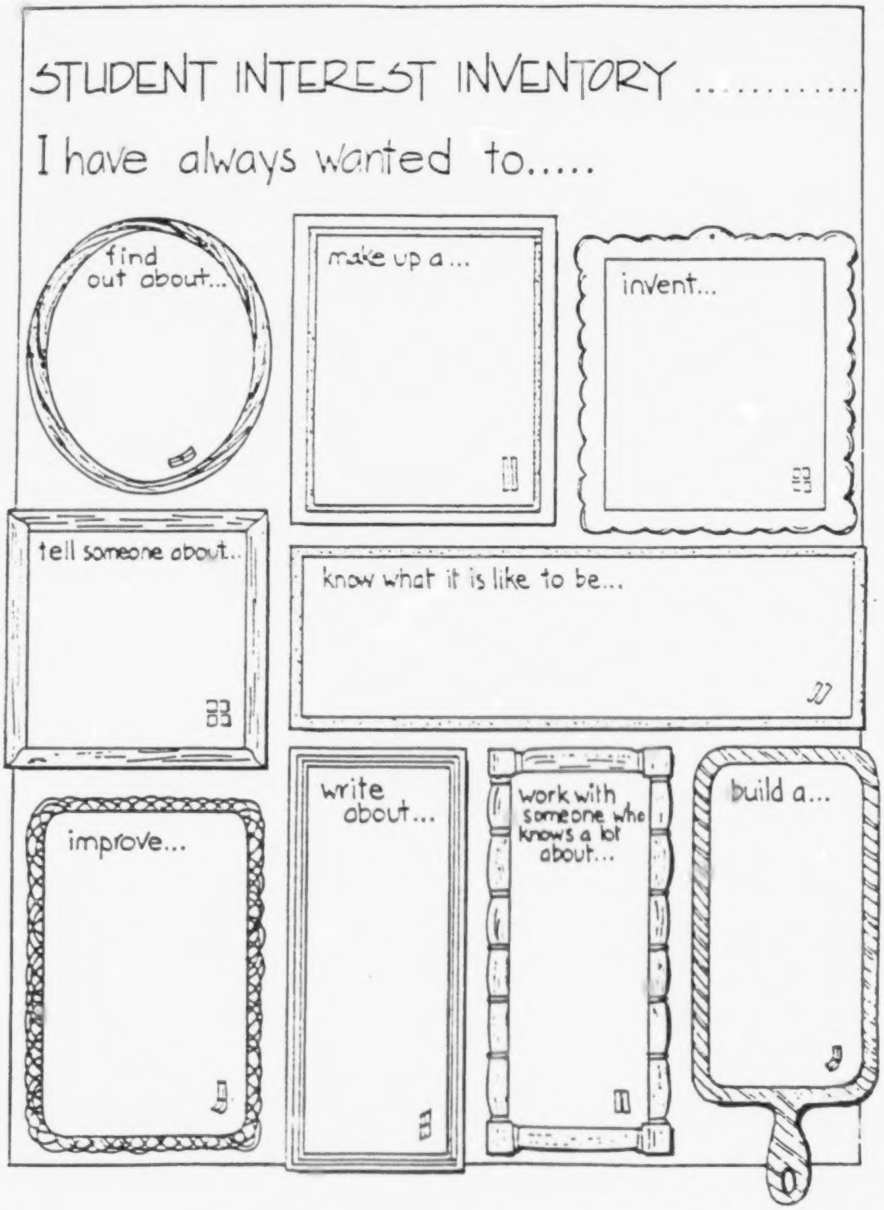
[51] From Edmonton Public School District No. 7. Reprinted with permission.

Appendix 45

Student Interest Inventory[52]



STUDENT INTEREST INVENTORY ....

I have always wanted to.....

find out about...

make up a ...

invent...

tell someone about...

know what it is like to be...

improve...

write about...

work with someone who knows a lot about...

build a...

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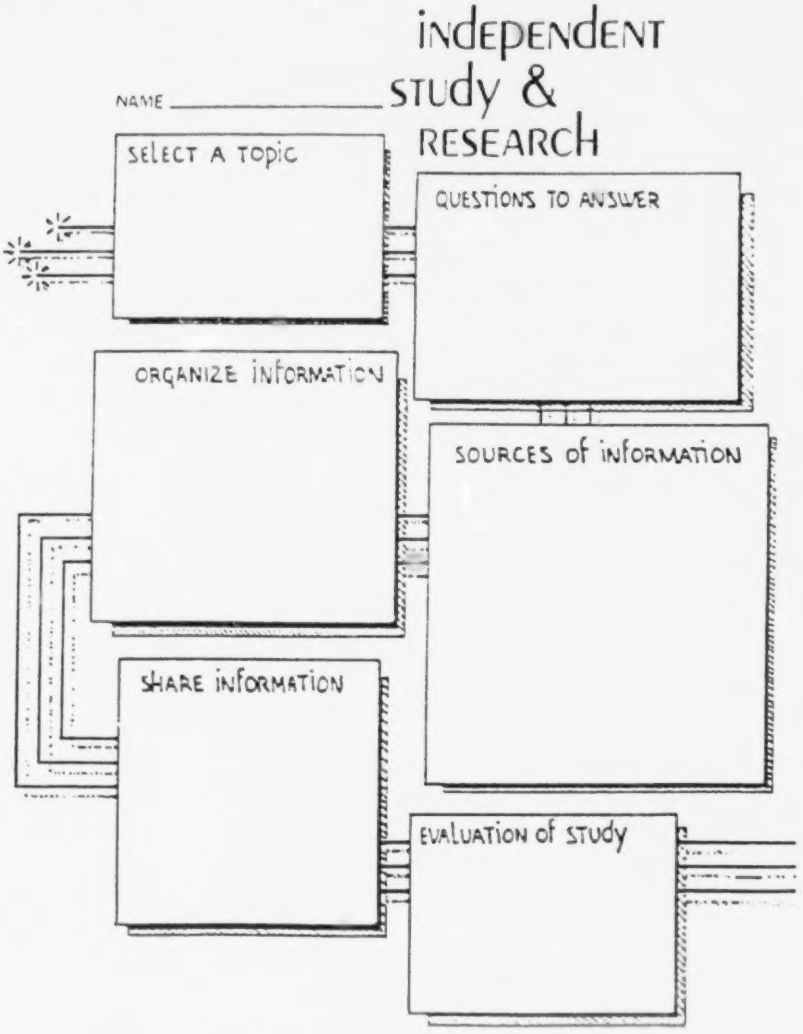
[52] From *Academic challenge: a programming guide* (p. 3.31), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Appendix 46

Independent Study and Research[53]


independent study & research
NAME
SELECT A TOPIC
QUESTIONS TO ANSWER
ORGANIZE INFORMATION
SOURCES OF INFORMATION
SHARE INFORMATION
EVALUATION OF STUDY

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[53] From *Academic challenge: a programming guide* (p. 6.52), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Appendix 47

Student Daily Log[54]

	Date: ______
	Name: ______
I completed: ______ ______ ______ ______ ______ ______	I must do: ______ ______ ______ ______ ______ ______
Evaluation of my day: ______ ______ ______ ______ ______ ______	I need: ______ ______ ______ ______ ______ ______

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[54] From *Academic challenge: a programming guide* (p. 4.78), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Suggestions for Presenting Student Products[55]

PRODUCT FORMS

ORAL

cassette
chant
choral reading
choral speech
choric drama
debate
dialogue
discussion
intercom message
interview
lecture
lesson teaching
monologue
oral imitations
panel discussion
reader's theatre
report
song
speech
story theatre
storytelling
survey

VISUAL

advertisement
artifacts
blueprint
book jacket
bulletin board
cartoon
charts
collage
computer graphics
diagram
display
film
filmstrip
flow-chart
folding screen
graffiti
mind map or web
mini-gallery
mural
overhead
painting
photoessay
photographs
poster
print
program
project cube
rebus
record cover
rubbings
scroll
slides
spread sheet
story board
tableau
tables
time capsule
timeline
transparency
visual journal
wordless book
xerox

WRITTEN

acrostic
advertisement
autobiography
bibliography
biography
book review
brochure
case study
celebrity cards
code
computer program
criticism
crossword puzzle
definitions
editorial
epitaphs
fact file
instructions
invitations
itinerary
journal/diary
letter
list
logbook
manual
menus
message
newspaper
outline
palindromes
pamphlet
puns
quotation collage
recipe
record book
report
requests
resume
schedule
script
slogans
song
story
summary
telegrams
textbook
tongue twisters
travelogue
want ads
worksheet

KINESTHETIC

collection
costume
creative movement
dance
demonstration
diorama
dramatization
experiment
flip-book
game
impersonation
mini-center
mobile
model
museum
pantomine
playmaking
prototype
puppetry
puzzle
scrapbook
sculpture
stitchery
terrarium
treasure hunt
vivarium
weaving

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[55] From *Academic challenge: a programming guide* (p. 6.40), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Gifted and Talented — Organizational Options[56]

Organizational options which can be used flexibly include:

Option	Description	Example
Compacting	Following determination of the scope and degree of proficiency in a specific area of knowledge, students may proceed to portions of the curriculum not mastered, pursue alternative topics for specific time periods or explore concepts in more depth.	As a result of pre-test mathematics scores indicating a thorough grasp of the planned instruction in numeration, the student will work independently on alternative base systems, check for patterns in numbers or explore Fibonacci sequence.
Rescheduling	Based upon individual assessment, a more able learner may be assigned to a learning group for instruction and interaction for a particular subject area or unit of study.	The student has a great deal of ability and interest in writing poetry. For six weeks, the student will attend a division II option class in creative writing instead of a Grade 3 language arts class.

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[56] From *Academic challenge: a programming guide* (p. 3.18), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Gifted and Talented — Organizational Options (cont'd)[56]

Option	Description	Example
Parallel curriculum	Following a comprehensive needs assessment, the curriculum is appropriately extended/enriched.	During a thematic unit study in language arts, a small group of students will pursue an interdisciplinary group study resulting in a slide-tape representation. The study needs to reflect the depth of thinking the gifted student should be experiencing; e.g., during a thematic study involving poetry, a small group may pursue an interdisciplinary study resulting in a student presentation depicting how poetry resembles a mathematics formula in its symbolic representation of imagery through metaphor or comparing poetry of different genres, from different cultures, depicting similar universal themes.
Replacing time	Students demonstrating an intense commitment and a need for specialized knowledge and skills may be accommodated through a replacement of instructional time in an alternate setting.	For a half day a month, students will work with a community mentor in his veterinarian clinic. To facilitate this working relationship students will be released from class with written parental consent. The student may contribute to the learning of classmates by presenting a summary of his or her findings through a creation of a brochure giving advice to those considering pet ownership.

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[56] From *Academic challenge: a programming guide* (p. 3.18), by Edmonton Public School District No. 7, 1988, Edmonton, AB: Edmonton Public School District No. 7. Reprinted with permission.

Interest Inventory for Young Students[57]

How Do You Feel About

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

☺ ______________________________ ☹

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[57] From Edmonton Public School District No. 7. Reprinted with permission.

Interest Inventory for Young Students[57]
Sample Completed Form

How Do You Feel About

☺	School	☹
☺	Recess	☹
☺	Gym	☹
☺	Reading	☹
☺	Arithmetic	☹
☺		☹
☺		☹
☺		☹

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[57] From Edmonton Public School District No 7 Reprinted with permission

Interest Inventory for Primary Aged Students[58]

Use the interest inventory to get to know your students. You will find special talents, hobbies and needs that will help you help your students.

1. In school the thing I like to do best is ____________________
2. Outside of school the thing I like to do best is ____________________
3. If I had a million dollars I would ____________________
4. When I grow up I will ____________________
5. I hate ____________________
6. My favourite animal is ____________________
7. The best sport is ____________________
8. When nobody is around I like to ____________________
9. The person I like best is ____________________
10. Next summer I hope to ____________________
11. I like to collect ____________________
12. My favourite place to be is ____________________
13. The things I like to make are ____________________
14. The best book I ever read was ____________________
15. The best TV show is ____________________
16. What I think is funny is ____________________

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[58] From *The NEW reading teacher's book of lists* (pp. 220–221), by E. B. Fry, et al., 1985, Englewood Cliffs, NJ: Prentice-Hall/a division of Simon & Schuster. Reprinted with permission.

Interest Inventory for Intermediate Aged Students[59]

It can be helpful when assigning a topic for a report, suggesting a good book or selecting meaningful examples to know students' preferences and interests. Use the interest inventory during the first week of school.

1. Outside of school my favourite activity is ______________________________
2. I work at ______________________________. My job is ____________________
3. The sport(s) I like to watch best is (are) ______________________________
4. The sport(s) I like to play best is (are) ______________________________
5. After high school I plan to ______________________________
6. The job I want to be doing as an adult is ______________________________
7. In school my favourite subject(s) is (are) ______________________________
8. The subject(s) in which I get the best grade is (are) ____________________
9. I would like to learn more about ______________________________
10. My main hobbies or leisure time activity is (are) ______________________
11. For pleasure I read ______________________________
12. I spend about _______ hours or _______ minutes a week reading for fun.
13. The best book I have ever read was (Title) ______________________________
14. The book I am reading now is (Title) ______________________________
15. My favourite magazine(s) is (are) ______________________________
16. The part of the world that interests me the most is ____________________
17. When I am finished with school, I hope to live in ______________________
18. The kinds of books or stories I like to read are ______________________
19. My favourite TV show is ______________________________
20. What makes me mad is ______________________________
21. What makes me laugh is ______________________________
22. My favourite person is ______________________________
23. Next summer I plan to ______________________________

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[59] From *The NEW reading teacher's book of lists* (pp. 220–221), by E. B. Fry, et al., 1985, Englewood Cliffs, NJ: Prentice-Hall/a division of Simon & Schuster. Reprinted with permission.

Cross-referencing Chart[60]

Subject	NATURE OF STUDENT Base programming on what is known about the nature of learning and development of students and the learning style, interests and abilities of each student	EVALUATION Make judgements about what the student is able to demonstrate relative to the knowledge, skills and attitudes all students are expected to learn	CURRICULUM EXPECTATIONS Determine the knowledge, skills and attitudes the student is expected to learn within a specific time frame. Specify how well the student is expected to perform	ORGANIZATIONAL AND INSTRUCTIONAL STRATEGIES Select learning environment, learning and instructional resources and organizational and instructional strategies to ensure each student is successful	ASSESSMENT Select assessment strategies for determining what the student is able to demonstrate relative to the knowledge, skills and attitudes all students are expected to learn. Identify methods by which judgements may be made about what the student is able to demonstrate. Collect data	COMMUNICATION Select methods of communicating information about student growth, relative to the knowledge, skills and attitudes all students are expected to learn, to students, parents and community
Language Arts						
Social Studies						
Math						
Science						
Phys. Ed.						
Health CALM						
Option 1						
Option 2						
Option 3						

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[60] From Edmonton Public School District No. 7. Reprinted with permission.

Adapting Instructional Materials[61]

Goals	Enabling Objectives	Strategies
	Print Products	
Increase reading comprehension	Create reading anticipation	Put frames around page to help students concentrate and focus attention
Learn important concepts	Bypass reading problems	Reduce reading level
Develop vocabulary	Stimulate discussion	Address limited number of concepts
Cultivate skills such as graph, chart and map reading	Provide repetition of key elements	
	Provide review and repetition	Limit number of items per page Use pictures or diagrams Use boldfaced vocabulary words
	Avoid overwhelming the student	Use location cues to help students find pages/paragraphs with answers
	Help students understand directions	Give concise, boldfaced directions
	Audiotapes	
Develop listening skills	Simplify concepts and language	Insert stopping points in script so amount of information presented can be adjusted to teacher and student needs
Learn important concepts	Increase motivation	Use sound effect, music and dramatic techniques
	Summarize material Bypass reading problems Capture student interest	Provide summaries on tapes
	Activities/Manipulatives/ Games	
Involve parents	Increase motivation	Convert reading-based to hands-on activities
Develop and apply concepts Develop another mode of learning	Develop concepts	

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[61] From *Adapting instructional materials for mainstreamed students. Issue Brief 1* (ERIC/SEP Special Project on Interagency Information Dissemination) (p. 11), by J. Burnette, 1987, Reston, VA: Council for Exceptional Children. Adapted and reprinted with permission.

Adapting Instructional Materials (cont'd)[61]

Goals	Enabling Objectives	Strategies
	Microcomputer Software	
Increase skills in graph, chart and map reading	Bypass reading problems	Use simple keyboard design
	Provide repetition and feedback when needed	Use simple screen design Use help menus Use adjustable length of pauses Use self-pacing
	Capture student interest Increase motivation Illustrate concepts graphically	Provide feedback for responses Use sound effects Use graphics
Develop, research and test hypotheses		Use of tools for instantaneous graphing of scientific data
Provide greater individualization of instruction	Provide more effective use of instructional time	Track study progress Modify student discs
Provide documentation for parents, reports, IPP meetings	Enable teachers to custom design instruction	Maintain data for and print reports
Save administrative time		

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[61] From *Adapting instructional materials for mainstreamed students. Issue Brief 1* (ERIC/SEP Special Project on Interagency Information Dissemination) (p. 11), by J. Burnette, 1987, Reston, VA: Council for Exceptional Children. Adapted and reprinted with permission.

Planning Activities and Adaptations Relative to a Curriculum Outcome[62]

Outcome	Activities	Basic Proficiencies	Adaptations
Students apply knowledge of written and spoken language	• participate in a cooperative research project related to a current social issue • present to class using a variety of mediums	• develop appropriate team skills • develop or practise basic research skills; e.g., find material using alphabetical sequencing, use an outline format, use data to support ideas • develop or practise skills for speaking in public	• student selects a team role through pointing at activity pictures • student illustrates content of report using a variety of art materials • student uses a touch window on the computer to design a cover for a research article • student operates tape recorder, overhead or projector during presentation of report • student videotapes peers presenting report • student provides his or her contribution on tape

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[62] From *Ideas and suggestions for curricular adaptations at the secondary level. Colorado effective education model* (p. 18), by J. Filbin and R. Kronberg, 1993. Denver, CO: Colorado Department of Education. Reprinted with permission.

Section VII
Footnote References

[1] *Room 14: a social language program* (p. 99), by C. Wilson, 1993, East Moline, IL: Linguisystems.

[2] *Circles of learning: cooperation in the classroom* (pp. 16–18), by D. W. Johnson, R. T. Johnson, et al., 1992, Alexandria, VA: Association for Supervision and Development.

[3] Johnson and Johnson (pp. 2, 8, 10, 14–22, 29).

[4] *Reading instruction that makes sense* (pp. 81–91), by M. Tarasoff, 1993, Victoria, BC: Active Learning Institute.

[5] *Complete learning disabilities handbook* (pp. 92–108), by J. Harwell, 1989, West Nyack, NY: Center for Applied Research in Education/a division of Simon & Schuster.

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